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1984 Survey of the Electronic Funds Transfer Transaction System

by

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ELECTRONIC FUNDS TRANSFER TRANSACTIONS

Not too many years ago, bankers anticipated the "checkless" society in which electronics would replace paper as the principal payments mechanism. To date this has not materialized, and is not likely to in the near future. The United States payments system remains firmly rooted in paper while electronics, on the other hand, is being reevaluated in terms of its impact upon the payments system.

Unfortunately, most early research on electronic funds transfer transactions (EFT) omitted the most important factor of the equation -- the consumer. The willingness of the consumer to relinquish traditional methods of handling payments was overestimated and the time required to generate a change in consumer habits was underestimated. Research today must concentrate on how the consumer uses current systems in order to determine how best to urge him towards the more cost-effective world of EFT.

The previous paragraphs served as the introduction to this survey in 1979. Little has changed. Many bankers continue to rely on paper, with little belief in electronics; usually only fragmented efforts are made to reduce the use of paper. Total displacement of checks has been less than 10 percent of the total volume. In addition, the equation remains the same: the time required to change consumer habits continues to be underestimate. After some 20 years, the banking community has been successful at prompting only one-third of the population into using some form of an electronic financial transaction.

EFT is an all-encompassing acronym. It involves automated clearing houses (ACH), which move both debit and credit transactions among financial institutions, and automated teller machines (ATM), which allow the customer to conduct many routine banking transactions on a 24-hour basis. It also involves point-of-sale systems (POS) which provide convenience for the customer and security for the merchant, and electronic bill payment which provides the customer at-home banking convenience via telephone and personal computer. EFT is for the consumer and the corporation. Regardless of the form it takes, it must provide the customer with something more than he is currently receiving and at a price that is equable with current systems.

This report, the seventh in a series of Bank Administration Institute annual surveys on EFT transactions, is designed to provide a financial institution with the ability to analyze growth, usage patterns, and the transaction mix for the years 1982 through 1984. Survey data for 1978 through 1981 may be found in previous reports.

Background

Bank Administration Institute has been a leader in payment systems research for several years by conducting studies of both the check collection system and the electronic transfer of funds. Early on, the two surveys were combined in the BAI Check Collection Performance Measurement Survey. Beginning in 1979, the EFT data were published separately from the check collection survey in a format that subsequent reports followed closely.

Survey Respondents

In October 1984, 230 commercial banks were mailed the Survey of the Electronic Funds Transfer Transaction System. Each of the banks had assets in excess of $250 million. Participating banks collected data during the week of November 12, 1984.

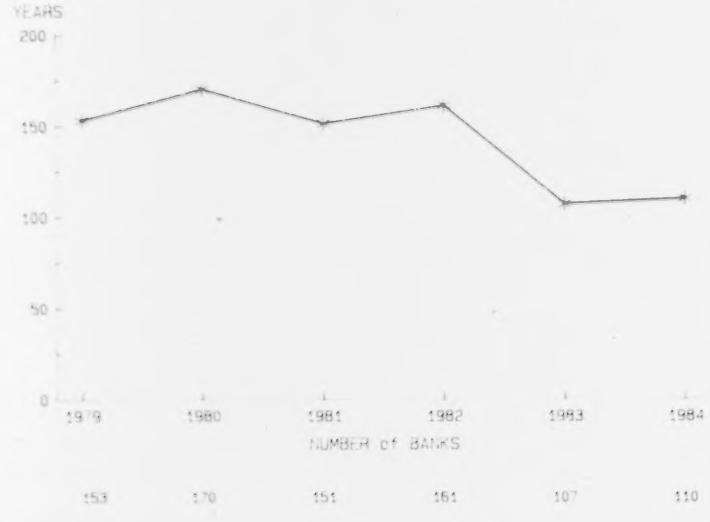
Figure 1 lists the number of commercial banks that have participated in the survey. The drop in participating banks between 1982 and 1983 can be attributed to merger activity and the advent of sharing that prevents some banks from providing the level of detail necessary to complete the survey.

Data collected in 1984 are extremely similar in scope to that of the 1983 survey data. Of the 110 banks participating in 1984, 77 had also participated in 1983. In both years, 40 percent of the top 10 banks and 48 percent of the top 50 banks were included, providing a solid mix of financial institutions in terms of size.

Several respondents could not answer every survey question because of constraints inherent in the internal systems in their banks. Consequently, only those banks that furnished valid answers to all questions pertaining to a given formula were included in the tabulations, which accounts for the varying number of respondents shown in the different tables. The formulas used for tabulating the results are provided to help individuals replicate the survey within their own financial institution for comparison purposes.

Although the identities of reporting banks remain confidential, institutions can use the data to compare their performance within a given market. A map in Appendix B defines the boundaries of the 16 geographic areas used in developing this report. An accompanying table, Table B1, shows the number of survey respondents from each area.

Figure 1
Participating Banks



Survey Highlights

- The data indicate a trend has developed in which an equal amount of debit and credit ACH transactions are being sent. As the private sector continues to increase its use of the ACH network, this trend is likely to continue.

- A higher proportion of credit transactions to debit transactions being received is reported by 62.5 percent of the geographic areas. Again, increased activity from the private sector has altered the ACH transaction mix in terms of debit and credit transactions.

- The proportion of interchange credit card cash withdrawals from an ATM increased 285 percent. In 1983, credit cards cash withdrawals accounted for 0.7 percent of the interchange transactions; 1984 data indicate the proportion has increased to 2.7 percent. This increase could be the result of many institutions allowing access to more than the traditional checking account at an interchange ATM.

- Average proprietary cash withdrawal from a checking account increased from $43 in 1983 to $50 in 1984. The interchange counterpart also increased from $43 in 1983 to $45 in 1984.

- The ratio of dollars deposited to dollars withdrawn at a proprietary ATM increased for the third consecutive year, from 1.80:1 in 1983 to 1.92:1 in 1984.

- Transactions at a drive-up unit located at the bank's main office and on an ATM located at a grocery tend to exceed the normal transaction mix by approaching an equal split of proprietary and interchange transactions. Interchange transactions have historicaly accounted for about 12 percent of the total transactions on an ATM.

- Average monthly transactions per ATM unit is reported at 4,462, and at 5,856 when balance inquiries are included.

- The proportion of ATM units at off-premise locations has increased 13 percent over figures from 1983. Primary growth has occurred at grocery sites.

- Of the total units projected for installation in 1985, 23 percent will be cash dispensers and 97 percent of the dispensers will be located in an off-premise location.

- A terminal for POS is averaging ten transactions to a checking and savings account per week and 77 to a credit card account.

- The data show 43.8 percent of the merchants are currently paying some type of fee, while 25 percent of the merchants are receiving some form of a fee when the bank owns the terminals.

With 30 automated clearing houses in operation during 1984, total ACH transactions increased 16 percent from 479 million items in 1983 to more than 556 million items in 1984. In 1984 government credit transactions decreased 7 percent, representing the first such decrease in the history of ACH. The private sector continued to increase its volume by some 38 percent over 1983. For the second consecutive year, the private sector surpassed the government sector, accounting for more than 60 percent of the total ACH volume, as compiled by the National Clearing House Association (NACHA).

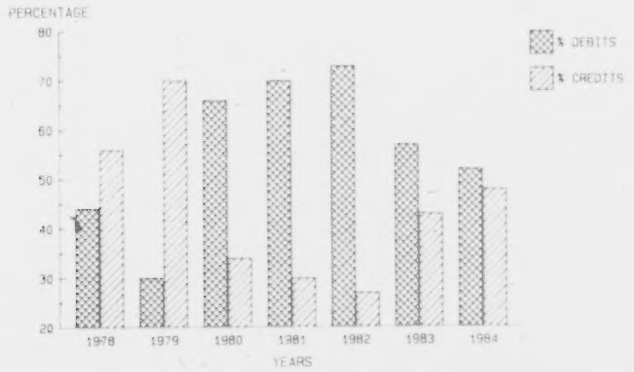
The use of ACH continues to grow as local ACH associations await the prospects of private computer services companies competing with the Federal Reserve in the processing of ACH transactions nationwide. In addition, ACH was used in 1984 by Exxon Oil Company in Arizona for point-of-sale transactions. Customers with a special Exxon card can have the price of their purchases automatically withdrawn from their checking accounts.

Because this survey is limited to a sample of commercial banks with assets of more than $250 million, the volume of ACH transactions is statistically insignificant. However, when the data are represented as percentages, trends relating to transactions types can be observed. Since most government credits also are initiated within the first few days of each month (predominately Social Security payments), the findings from the mid-November survey are primarily private sector debits and credits. Tables 1 through 7 present ACH-related data.

ACH Transactions: Sent

The 1984 survey shows an overall decrease in the percentage of ACH debits being sent. Current trends indicate that equal proportions of debit and credit transactions are being sent. This trend can be attributed to private sector activity surpassing that of the government for the second consecutive year. The 1984 data in Figure 2, show the percentage of average ACH debit transactions sent lost 5 percentage points to credit transactions, compared to the same period in 1983.

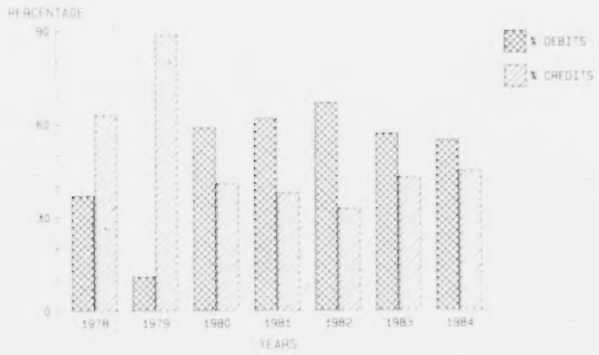
Figure 2
Percentage of ACH Debits and Credits Sent



ACH Transactions: Received

Figure 3 illustrates the historical trends of ACH transactions received. The 1984 survey data again indicate a shift in the proportion of debits and credits being received. Average debits received decreased to 55 percent in 1984 from 57 percent in 1983. Of the 16 geographic areas, 10 reported a higher proportion of credit transactions in 1984 than in 1983, thus aiding in the overall average increase in credit transactions being received.

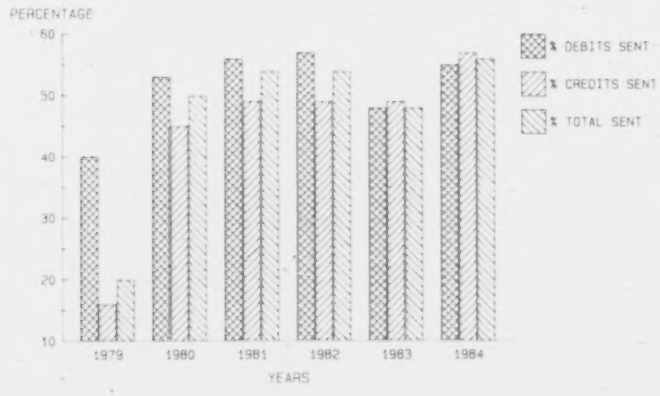
Figure 3
Percentage of ACH Debits and Credits Received



ACH Transactions: Sent Versus Received

In recent years, the relationship of survey data for ACH items sent versus received has remained fairly stable. As noted previously, there is a trend toward increased credit transactions. Figure 4 helps illustrate this trend. Items received is simply an inverse of this graph.

Figure 4
Percentage of ACH Items Sent Versus Received



ACH Transactions: Returned

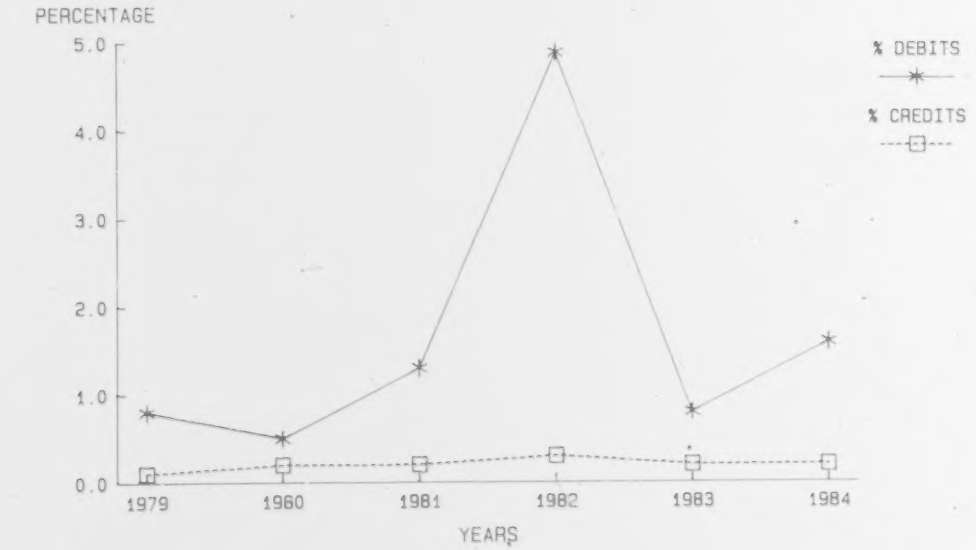
Return items for ACH transactions were measured by return items that were sent and by return items that were received. Returned items sent refer to any ACH transaction returned to the originator that either could not be posted to an account or for which no prenotification was on file. Return items received are defined as any ACH transaction received by the originator, returned by either the automatic clearing house or the intended receiver. The survey did not ask respondents to identify reasons for returns.

By the nature of the item, debits are the most frequent transaction type to be returned. Figures 5a and 5b show the trends of returned items. While the percentage of items returned as compared to items received remained stable in 1984, the percentage of debits items returned as compared to items sent increased by 100 percent.

Returns continue to plague the efficiency of the ACH network. While the procedure in theory should take a few days, in practice it is not unusual for it to take a month or longer. Typically these delays occur because a bank's back office gives such transactions low priority since they represent low dollar amounts and the volume might be small.

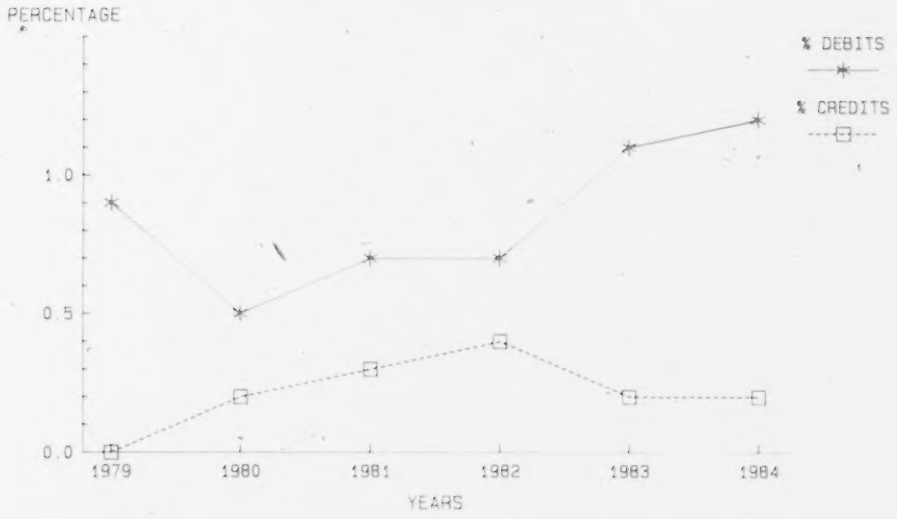
Promise have been made to streamline return-item processing and encourage the implementation of an automated system; however, the data continue to show otherwise. One way to assist in the improvement of the ACH return-item mechanism is by the Fed assessing an actual cost fee for paper-based processing. If this does indeed become reality, the fee will encourage depository institutions to automate return-item processing.

Figure 5a
Percentage of Items Returned of Items Sent



% DEBITS	0.8	0.5	1.3	4.9	0.8	1.6
% CREDITS	0.1	0.2	0.2	0.3	0.2	0.2

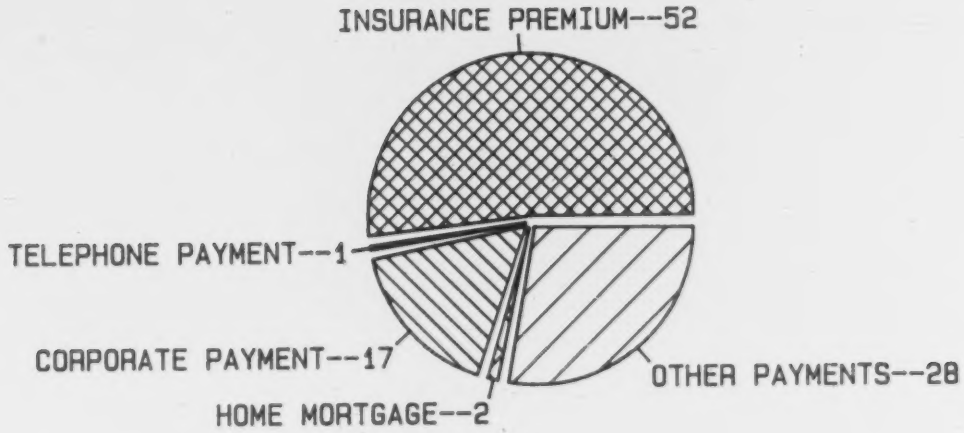
Figure 5b
Percentage of ACH Items Returned
of Items Received



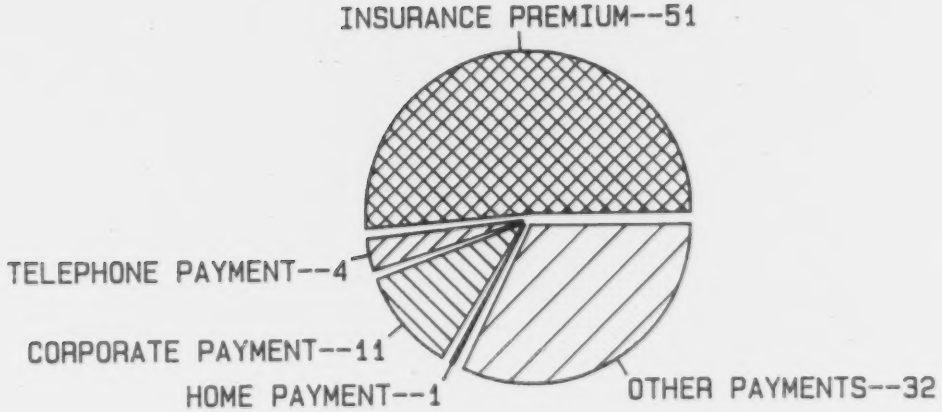
% DEBITS	0.9	0.5	0.7	0.7	1.1	1.2
% CREDITS	0.0	0.2	0.3	0.4	0.2	0.2

Types: ACH Debits

A breakdown of ACH debits sent and received by the responding banks is presented by type of transaction in Figure 6. As can be expected, insurance premiums continue to lead in overall ACH transaction volume.



TRANSACTIONS SENT



TRANSACTIONS RECEIVED

Figure 6
Percentage of ACH Debit Transactions

TABLE 1
PERCENTAGE OF ACH DEBITS AND CREDITS SENT BY AREA

Area	Percent Debits+			Percent Credits++		
	1982	1983	1984	1982	1983	1984
Boston	19.8%	41.0%	54.7%	80.2%	59.0%	45.3%
New York	20.8	46.4	60.0	79.2	53.6	40.0
Philadelphia	27.1	22.0	24.2	72.9	78.0	75.8
Pittsburgh	36.1	75.2	48.3	63.9	24.8	51.7
Washington, D.C.	33.1	40.3	32.1	66.9	59.7	67.9
Atlanta	50.9	81.4	49.4	49.1	18.6	50.6
Chicago	23.0	51.6	36.1	77.0	48.4	63.8
Cleveland	47.6	57.9	49.3	52.4	42.1	50.7
Detroit	52.9	50.0	46.5	47.1	50.0	53.5
Minneapolis/St. Paul	45.1	60.1	*	54.9	39.9	*
St. Louis	55.7	52.5	71.2	44.3	47.5	28.8
Dallas	86.8	64.0	27.1	13.2	36.0	72.9
Houston	61.9	72.5	85.3	38.1	27.5	14.7
Los Angeles	31.1	53.4	50.2	68.9	46.6	49.8
San Francisco	48.5	63.0	55.3	51.5	37.0	44.7
Denver	55.7	68.6	51.1	44.3	31.4	48.9
Average	73.1%	56.5%	52.1%	26.9%	43.5%	47.9%
Median	37.7%	37.4%	42.4%	62.3%	64.0%	57.6%

*No respondents; $\frac{+Q1}{Q5} \times 100$; $\frac{++Q3}{Q5} \times 100$.

TABLE 2
PERCENTAGE OF ACH DEBITS AND CREDITS RECEIVED BY AREA

Area	Percent Debits+			Percent Credits++		
	1982	1983	1984	1982	1983	1984
Boston	51.9%	54.1%	51.4%	48.1%	45.9%	48.6%
New York	66.6	52.6	27.1	33.4	47.4	72.9
Philadelphia	65.6	51.5	31.9	34.4	48.5	68.1
Pittsburgh	67.0	60.6	28.7	33.0	39.4	71.3
Washington, D.C.	61.0	48.4	43.9	39.0	51.6	56.1
Atlanta	68.9	59.4	71.6	31.1	40.6	28.4
Chicago	57.2	57.8	46.4	42.8	42.2	45.9
Cleveland	66.8	49.0	46.0	33.2	51.0	54.0
Detroit	61.9	74.4	29.6	38.1	25.6	70.4
Minneapolis/St. Paul	61.5	58.5	32.4	38.5	41.5	67.6
St. Louis	62.2	58.8	65.1	37.8	41.2	34.9
Dallas	66.2	66.8	33.8	33.8	33.2	66.2
Houston	66.4	56.5	71.8	33.6	43.5	28.2
Los Angeles	59.4	52.9	50.7	40.6	47.1	49.3
San Francisco	53.6	48.6	60.5	46.4	51.4	39.5
Denver	66.9	77.5	57.0	33.1	22.5	43.0
Average	66.6%	57.4%	54.5%	33.4%	42.6%	45.4%
Median	67.6%	58.8%	51.8%	32.4%	41.4%	47.4%

*No respondents; $\frac{+Q2}{Q6} \times 100$; $\frac{++Q4}{Q6} \times 100$.

TABLE 3
PERCENTAGE OF ACH ITEMS SENT VERSUS RECEIVED BY AREA

Area	Percent of Debits+					
	Sent			Received		
	1982	1983	1984	1982	1983	1984
Boston	14.5%	48.3%	69.8%	85.5%	51.7%	30.2%
New York	17.8	56.6	92.7	82.2	43.4	7.3
Philadelphia	13.0	40.0	41.0	87.0	60.0	59.0
Pittsburgh	15.2	56.1	77.7	84.8	43.9	22.3
Washington, D.C.	22.6	46.5	31.3	77.4	53.5	68.7
Atlanta	22.2	60.5	32.1	77.8	39.5	67.9
Chicago	33.3	59.5	80.4	66.7	40.5	19.6
Cleveland	37.0	50.8	61.8	63.0	49.2	38.2
Detroit	17.7	15.8	29.7	82.3	84.2	70.3
Minneapolis/St. Paul	35.2	49.0	*	64.8	51.0	100.0
St. Louis	29.9	51.1	51.5	70.1	48.9	48.5
Dallas	30.4	34.7	27.6	69.6	65.3	72.4
Houston	18.4	27.0	49.4	81.6	73.0	50.6
Los Angeles	12.9	44.5	45.7	87.1	55.5	46.2
San Francisco	11.7	32.2	34.7	88.3	67.8	65.3
Denver	26.7	20.8	19.4	73.3	79.2	80.6
Average	56.9%	47.8%	54.7%	43.1%	52.2%	45.3%
Median	8.2%	17.6%	30.0%	91.8%	83.0%	71.9%

*No respondents; $\frac{+ Q1/Q2}{Q1 + Q2} \times 100$; $\frac{\pm Q3/Q4}{Q3 + Q4} \times 100$; $\frac{\S Q5/Q6}{Q5 + Q6} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 3 on the following page.

TABLE 3 (Continued)

Percent of Credits‡

Area	Sent 1982	Sent 1983	Sent 1984	Received 1982	Received 1983	Received 1984
Boston	47.4%	61.4%	66.9%	52.6%	38.6%	33.1%
New York	41.0	62.5	75.8	59.0	37.5	24.2
Philadelphia	40.9	71.5	50.4	59.1	28.5	49.6
Pittsburgh	21.2	39.3	59.9	78.8	60.7	40.1
Washington, D.C.	34.3	54.6	43.0	65.7	45.4	57.0
Atlanta	27.9	34.0	55.0	72.1	66.0	45.0
Chicago	57.0	65.3	87.9	43.0	34.7	12.1
Cleveland	49.7	41.9	58.6	50.3	58.1	41.4
Detroit	11.5	35.3	17.0	88.5	64.7	83.0
Minneapolis/St. Paul	44.4	47.3	*	55.6	52.7	100.0
St. Louis	41.2	57.5	44.5	58.8	42.5	55.6
Dallas	15.0	37.4	34.4	85.0	62.6	65.6
Houston	6.4	30.0	74.3	93.6	84.6	70.0
Los Angeles	21.1	44.0	46.2	78.9	56.0	53.8
San Francisco	16.5	20.8	39.7	83.5	79.2	60.3
Denver	31.4	29.3	23.4	68.6	70.7	76.6
Average	48.6%	48.8%	57.1%	51.4%	51.2%	42.9%
Median	25.3%	31.4%	40.9%	74.7%	69.2%	60.4%

Total ACH Items§

Area	Sent 1982	Sent 1983	Sent 1984	Received 1982	Received 1983	Received 1984
Boston	37.5%	55.2%	68.5%	62.5%	44.8%	31.5
New York	35.0	59.6	85.1	65.0	40.4	14.9
Philadelphia	29.5	61.0	47.7	70.5	39.0	52.3
Pittsburgh	17.3	50.7	67.4	82.7	49.3	32.6
Washington, D.C.	29.3	51.0	38.4	70.7	49.0	61.6
Atlanta	26.3	52.8	40.7	73.7	47.2	59.3
Chicago	53.0	62.1	84.0	47.0	37.9	16.0
Cleveland	46.6	46.6	60.1	53.4	53.4	39.9
Detroit	15.0	21.8	21.2	85.0	78.2	78.8
Minneapolis/St. Paul	39.6	48.3	*	60.4	51.7	100.0
St. Louis	43.6	53.9	49.2	56.4	46.1	50.8
Dallas	25.0	35.6	32.2	75.0	64.4	67.8
Houston	15.1	22.4	45.1	84.9	77.6	54.9
Los Angeles	21.7	44.3	46.0	78.3	55.7	54.0
San Francisco	19.9	26.8	36.7	80.1	73.2	63.3
Denver	27.9	22.9	21.2	72.1	77.1	78.8
Average	54.4%	48.2%	55.8%	45.6%	51.8%	44.2
Median	26.2%	30.8%	35.9	73.8%	69.2%	64.1

TABLE 4
PERCENTAGE OF ACH ITEMS RETURNED OF ITEMS SENT BY AREA

Area	Percent Debits+			Percent Credits±			Percent Total§		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	21.5%	0.4%	0.2%	0.2%	0.2%	0.1%	2.7%	0.2%	0.1%
New York	27.0	0.7	3.3	1.1	0.1	0.2	22.6	0.6	2.1
Philadelphia	7.9	2.5	1.0	0.7	0.3	0.3	4.5	0.8	0.5
Pittsburgh	15.5	0.4	0.0	0.6	0.6	0.1	5.1	0.4	0.1
Washington, D.C.	18.0	1.3	3.1	1.0	0.2	0.7	8.8	0.6	1.5
Atlanta	8.8	0.6	1.0	1.0	0.3	0.1	7.4	0.5	0.6
Chicago	5.0	0.2	0.1	0.4	0.2	0.1	1.3	0.2	0.1
Cleveland	7.6	0.8	0.4	0.6	0.2	0.2	2.3	0.5	0.3
Detroit	2.2	5.2	1.5	16.9	0.4	0.3	2.2	3.3	1.1
Minneapolis/St. Paul	0.1	0.0	*	0.0	0.0	*	0.0	0.0	*
St. Louis	8.0	0.6	0.2	0.5	0.1	0.1	1.8	0.4	0.2
Dallas	6.7	0.5	0.2	3.1	0.3	0.0	5.9	0.4	1.1
Houston	57.0	0.3	0.0	0.1	0.2	0.0	6.7	0.3	0.0
Los Angeles	23.1	1.8	2.3	6.2	0.5	0.5	3.7	1.3	1.4
San Francisco	74.1	3.0	1.8	10.6	1.0	0.7	35.0	2.3	1.4
Denver	2.7	0.7	0.4	0.7	0.1	0.1	0.6	0.5	0.2
Average	4.9%	0.8%	1.6%	0.3%	0.2%	0.2%	0.5%	0.6%	0.9%
Median	2.7%	2.1%	1.0%	0.1%	0.1%	0.1%	1.2%	0.9%	0.6%

*No respondents; $^{+}\frac{Q7}{Q1} \times 100$; $_{Q3}\ ^{\pm}\frac{Q9}{} \times 100$; $_{Q5}\ ^{\S}\frac{Q11}{} \times 100$.

TABLE 5
PERCENTAGE OF ACH ITEMS RETURNED OF ITEMS RECEIVED BY AREA

Area	Percent Debits+			Percent Credits±			Percent Total§		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0.3%	0.4%	0.6%	0.3%	0.3%	0.2%	0.2%	0.3%	0.4%
New York	0.7	1.2	52.4	1.5	0.3	0.7	0.8	0.8	14.7
Philadelphia	0.6	0.9	0.4	1.0	0.2	0.3	0.8	0.6	0.3
Pittsburgh	0.3	0.8	1.4	0.0	0.3	0.1	0.2	0.6	0.5
Washington, D.C.	1.3	0.9	0.6	0.2	0.2	0.3	0.8	0.5	0.4
Atlanta	1.5	2.7	0.9	0.3	0.1	0.1	1.0	1.7	0.7
Chicago	2.3	1.9	4.2	2.0	0.7	0.7	2.0	1.4	2.4
Cleveland	0.6	1.6	3.8	0.5	0.2	0.1	0.5	0.8	1.8
Detroit	0.3	0.2	0.5	0.1	0.5	0.0	0.2	0.3	0.1
Minneapolis/St. Paul	0.4	0.9	0.0	0.2	0.1	0.0	0.3	0.6	0.0
St. Louis	1.4	0.9	0.7	2.1	0.6	0.1	1.3	0.8	0.5
Dallas	3.8	0.3	0.2	0.1	0.1	0.1	1.3	0.3	0.1
Houston	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Los Angeles	0.6	1.1	1.9	0.1	0.3	0.1	0.4	0.7	1.0
San Francisco	0.8	0.6	0.4	0.2	0.1	0.1	0.5	0.3	0.3
Denver	1.0	0.7	0.4	0.6	0.1	0.0	0.8	0.5	0.3
Average	0.7%	1.1%	2.6%	0.4%	0.2%	0.2%	0.5%	0.7%	1.5%
Median	0.2%	0.3%	0.4%	0.1%	0.0%	0.0%	0.2%	0.2%	0.2%

*No respondents; $\frac{+Q8}{Q2} \times 100$; $\frac{\pm Q10}{Q4} \times 100$; § $\frac{Q12}{Q6} \times 100$.

TABLE 6
PERCENTAGE OF ACH DEBIT TRANSACTIONS SENT BY TYPE OF TRANSACTION BY AREA

Area	Insurance Premium†			Home Mortgage±		
	1982	1983	1984	1982	1983	1984
Boston	0.0%	2.1%	6.4%	0.0%	0.5%	1.1%
New York	13.2	45.0	91.3	0.0	0.0	0.4
Philadelphia	0.0	5.7	3.0	0.0	0.0	0.2
Pittsburgh	0.0	0.8	2.4	0.0	0.0	0.0
Washington, D.C.	11.5	68.0	56.6	2.8	3.9	0.0
Atlanta	15.2	66.7	34.4	6.9	5.9	2.2
Chicago	2.1	36.5	25.2	0.0	0.0	15.5
Cleveland	28.7	10.4	17.5	0.1	1.9	1.8
Detroit	0.0	0.0	0.0	0.1	0.5	0.0
Minneapolis/St. Paul	25.9	74.6	✲	1.0	7.1	✲
St. Louis	11.4	35.6	46.9	3.2	9.7	6.5
Dallas	0.0	6.6	6.9	0.0	0.2	1.5
Houston	1.2	0.0	0.0	10.0	0.0	0.0
Los Angeles	16.4	84.5	21.6	6.8	0.0	0.0
San Francisco	22.9	58.8	2.2	0.5	4.2	0.1
Denver	10.7	73.3	68.8	12.9	4.9	2.7
Average	78.3%	40.4%	51.8%	0.3%	3.1%	1.6%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

✲No respondents; †$\frac{Q13}{Q23} \times 100$; ±$\frac{Q15}{Q23} \times 100$; §$\frac{Q17}{Q23} \times 100$; ‖$\frac{Q19}{Q23} \times 100$; #$\frac{Q21}{Q23} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 6 on the following page.

TABLE 6 (Continued)

Area	Telephone Bill Payment§ 1982	1983	1984	Corporate Payment II 1982	1983	1984
Boston	0.0%	0.7%	0.2%	69.9%	0.1%	8.0%
New York	0.0	0.0	0.2	49.7	50.3	6.4
Philadelphia	7.5	6.8	11.7	38.5	80.6	63.4
Pittsburgh	0.0	0.2	0.3	49.7	99.0	97.4
Washington, D.C.	16.7	0.0	0.6	29.3	27.3	27.7
Atlanta	4.8	1.7	2.3	17.2	14.1	15.2
Chicago	0.0	0.0	0.0	47.5	60.7	38.0
Cleveland	0.0	0.0	0.0	43.3	21.4	17.3
Detroit	0.0	0.0	0.0	38.0	61.6	10.4
Minneapolis/St. Paul	0.1	0.0	*	24.7	11.2	*
St. Louis	0.0	0.0	0.0	52.9	21.8	34.7
Dallas	0.0	0.3	4.5	47.4	76.6	86.9
Houston	0.0	0.0	0.0	25.5	100.0	100.0
Los Angeles	0.0	0.8	0.0	13.2	4.5	1.4
San Francisco	0.0	0.0	0.0	20.8	28.4	6.0
Denver	0.0	0.0	0.0	43.5	8.0	6.1
Average	0.4%	1.0%	0.8%	11.8%	32.1%	17.5%
Median	0.0%	0.0%	0.0%	15.5%	40.9%	19.4%

Area	Other Payments # 1982	1983	1984
Boston	30.1%	96.6%	84.4%
New York	37.0	4.7	1.7
Philadelphia	54.0	6.9	21.7
Pittsburgh	50.3	0.0	0.0
Washington, D.C.	39.8	0.8	15.0
Atlanta	55.9	11.6	45.9
Chicago	50.4	2.8	21.2
Cleveland	27.8	66.3	63.3
Detroit	61.9	37.9	89.6
Minneapolis/St. Paul	48.4	7.1	*
St. Louis	32.5	32.9	11.9
Dallas	52.6	16.3	0.2
Houston	63.2	0.0	0.0
Los Angeles	63.6	10.4	76.9
San Francisco	55.8	8.6	91.7
Denver	33.0	13.8	22.4
Average	9.2%	23.4%	28.4%
Median	36.2%	4.6%	20.6%

TABLE 7

PERCENTAGE OF ACH DEBIT TRANSACTIONS RECEIVED BY TYPE OF TRANSACTIONS BY AREA

Area	Insurance Premium+			Home Mortgage±		
	1982	1983	1984	1982	1983	1984
Boston	26.8%	3.1%	31.1%	2.4%	0.5%	0.0%
New York	64.6	44.7	56.5	0.0	0.0	0.4
Philadelphia	54.7	55.5	43.8	0.1	0.1	5.7
Pittsburgh	42.2	62.0	71.1	0.0	0.0	0.0
Washington, D.C.	35.8	40.2	46.8	2.2	5.8	1.5
Atlanta	37.2	45.9	75.5	3.7	6.3	1.8
Chicago	44.5	46.4	36.1	1.9	2.5	4.0
Cleveland	44.6	51.1	38.3	2.2	2.0	2.1
Detroit	54.7	33.2	10.6	0.7	0.4	0.0
Minneapolis/St. Paul	33.0	37.4	14.0	2.2	0.8	3.7
St. Louis	38.0	21.0	28.0	3.5	2.6	1.2
Dallas	50.1	12.1	58.7	5.4	0.0	0.1
Houston	30.0	1.2	77.0	0.9	0.0	0.1
Los Angeles	50.5	55.6	56.7	0.4	0.8	0.6
San Francisco	41.9	48.7	30.1	2.0	8.3	0.7
Denver	42.9	7.0	8.8	2.1	1.2	0.7
Average	28.5%	30.3%	50.8%	1.8%	2.5%	1.4%
Median	48.2%	46.8%	44.0%	0.1%	0.1%	0.2%

*No respondents; $\frac{+Q14}{Q24} \times 100$; $\frac{\pm Q16}{Q24} \times 100$; $\frac{\S Q18}{Q24} \times 100$; II $\frac{Q20}{Q24} \times 100$; $\frac{\#Q22}{Q24} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 7 on the following page.

TABLE 7 (Continued)

Area	Telephone Bill Payment§ 1982	1983	1984	Corporate Payment ‡‡ 1982	1983	1984
Boston	5.2%	2.8%	1.0%	23.4%	8.0%	29.0%
New York	0.0	0.0	0.0	17.7	24.8	13.6
Philadelphia	0.1	0.0	1.9	24.3	34.2	23.0
Pittsburgh	0.0	6.5	16.7	11.9	13.5	0.0
Washington, D.C.	0.0	0.0	0.3	11.9	35.0	37.5
Atlanta	0.7	1.6	1.3	8.7	15.5	5.5
Chicago	0.4	1.8	3.2	14.7	14.3	40.0
Cleveland	0.1	0.2	0.1	17.3	23.5	19.2
Detroit	0.2	0.1	0.0	21.3	17.8	9.0
Minneapolis/St. Paul	7.7	10.2	6.8	15.6	15.6	6.3
St. Louis	0.6	2.6	4.6	30.1	15.9	6.3
Dallas	0.0	0.0	0.0	21.2	2.9	11.7
Houston	0.0	0.0	0.0	4.6	70.0	22.8
Los Angeles	0.0	1.8	5.0	11.9	14.7	4.9
San Francisco	1.6	0.4	1.9	10.2	21.0	4.8
Denver	0.0	0.0	0.9	20.7	3.6	4.9
Average	0.7%	1.4%	4.4%	10.0%	18.0%	10.8%
Median	0.0%	0.0%	0.0%	13.9%	18.9%	14.4%

Area	Other Payments # 1982	1983	1984
Boston	42.2%	85.6%	38.8%
New York	17.7	30.5	29.5
Philadelphia	20.9	10.2	17.5
Pittsburgh	45.9	18.0	12.2
Washington, D.C.	50.1	19.0	13.9
Atlanta	49.6	30.7	16.0
Chicago	38.6	35.0	16.7
Cleveland	35.8	23.2	40.2
Detroit	23.1	48.5	80.4
Minneapolis/St. Paul	41.4	36.0	69.2
St. Louis	27.7	57.9	10.0
Dallas	23.2	85.0	29.4
Houston	64.5	28.8	0.0
Los Angeles	37.2	27.1	32.8
San Francisco	44.3	21.6	62.6
Denver	34.3	88.2	84.6
Average	59.1%	47.8%	32.3%
Median	27.2%	16.2%	16.3%

The automatic teller machine (ATM) was first installed in the late 1960s. This innovation in banking was primarily used to enhance the financial institution's image and positioning for long-term cost reductions. In the 1970s, ATM programs expanded with the developments of networking technology. Many financial institutions began looking at the strategic placement of off-premise ATMs.

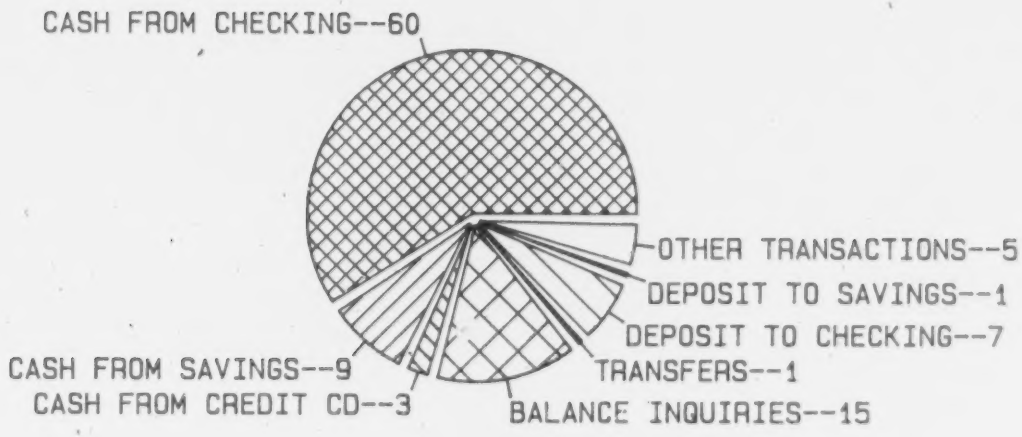
Today, business plans for ATMs are beginning to be reshaped. In 1984, the number of ATMs and cash dispensers shipped into the marketplace declined. Many believe the financial industry is reevaluating its future direction and the role retail banking may or may not play. Also, as point-of-sale and home banking expand, questions will rise concerning the strategic plan for ATM and cash dispenser installations.

The following section provides survey responses to the transaction mix, average dollar variables, and transaction volume for both proprietary and interchange transactions. In addition, statistical information is provided on 1985 equipment installation plans and on the topic of service charges for ATM transactions. Tables 8 through 22 present ATM-related data.

Transaction Mix

Figure 7 illustrates the proportion of transactions in both the proprietary and interchange environment. This transaction mix has remained fairly constant with cash withdrawals and balance inquiries representing more than 70 percent of the total transactions.

Two interesting trends surfaced in 1984: the increase of cash withdrawals from credit card accounts and the decrease of balance inquiries. Cash withdrawn from a credit card account for a proprietary transaction increased on average 37.5 percent (from 0.8 percent in 1983 to 1.1 percent in 1984); the average increase for an interchange was 285 percent (0.7 percent in 1983 to 2.7 percent in 1984). This increase in credit card volume could be a result of many institutions operating in the Master Teller program and the VISA ATM Network, along with allowing access to credit card accounts in other sharing programs. The decrease in the average percentage of balance inquiry transactions also should be noted. Proprietary transactions had a 6 percent decline in balance inquiries, from 24 percent in 1983, while the interchange transactions had a 27 percent decline. It is difficult to determine the primary reason for this change, but it is known many institutions now include the balance information on every transaction record, thus reducing the need for a cardholder to request a separate balance inquiry.



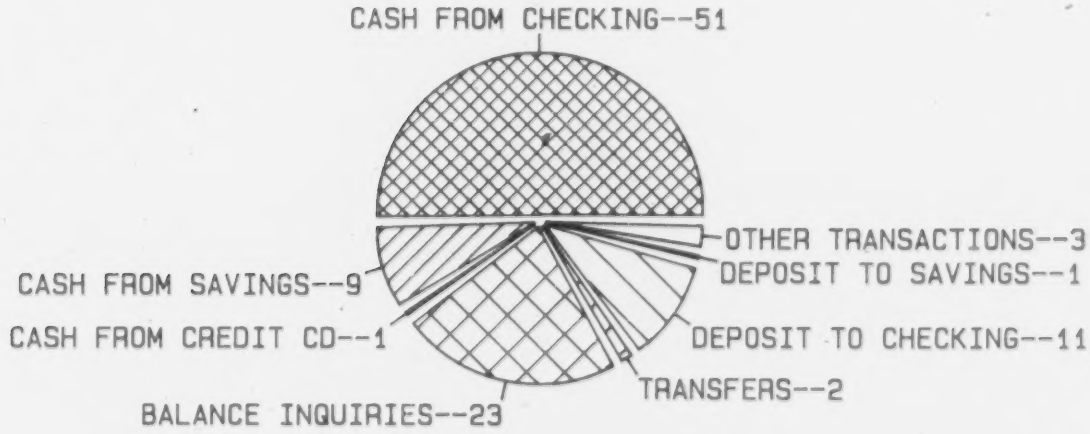


Figure 7
Percentage of ATM Transactions

Dollar Value of ATM Transactions

The average dollar value of a proprietary cash withdrawal in 1984 was $50, which outperformed the 1984 interchange cash withdrawal of $45. On the deposit side, the average proprietary transaction increased from $399 in 1983 to $523 in 1984, while the interchange deposit value declined from $709 to $342. Table 10 provides a comparison of the dollar value of proprietary transactions by geographic area, and Table 11 provides a comparison of the dollar value of interchange transactions.

Weekly ATM Transactions

Historically, proprietary transactions at ATMs have followed a roller coaster path; 1984 was no different. Transactions at a proprietary ATM declined 3 percent, excluding balance inquiries. This drop can be explained by the simple dilution of transaction volume from the increased installation of ATMs and the migration of cardholders to the more convenient off-premise ATM locations. This is further seen in the 27 percent increase of interchange transaction volume, again excluding balance inquiries.

This situation of reduced transaction volume has proved in the past to be only temporary. As institutions and networks continue to put the pieces of the puzzle together, transaction growth usually will return. Some locations, however, may never recover and may continue to decline with the increase in convenient off-premise ATM locations. In these situations, the institution should consider redeployment. Figure 8 shows 1980 through 1984 ATM weekly volume data.

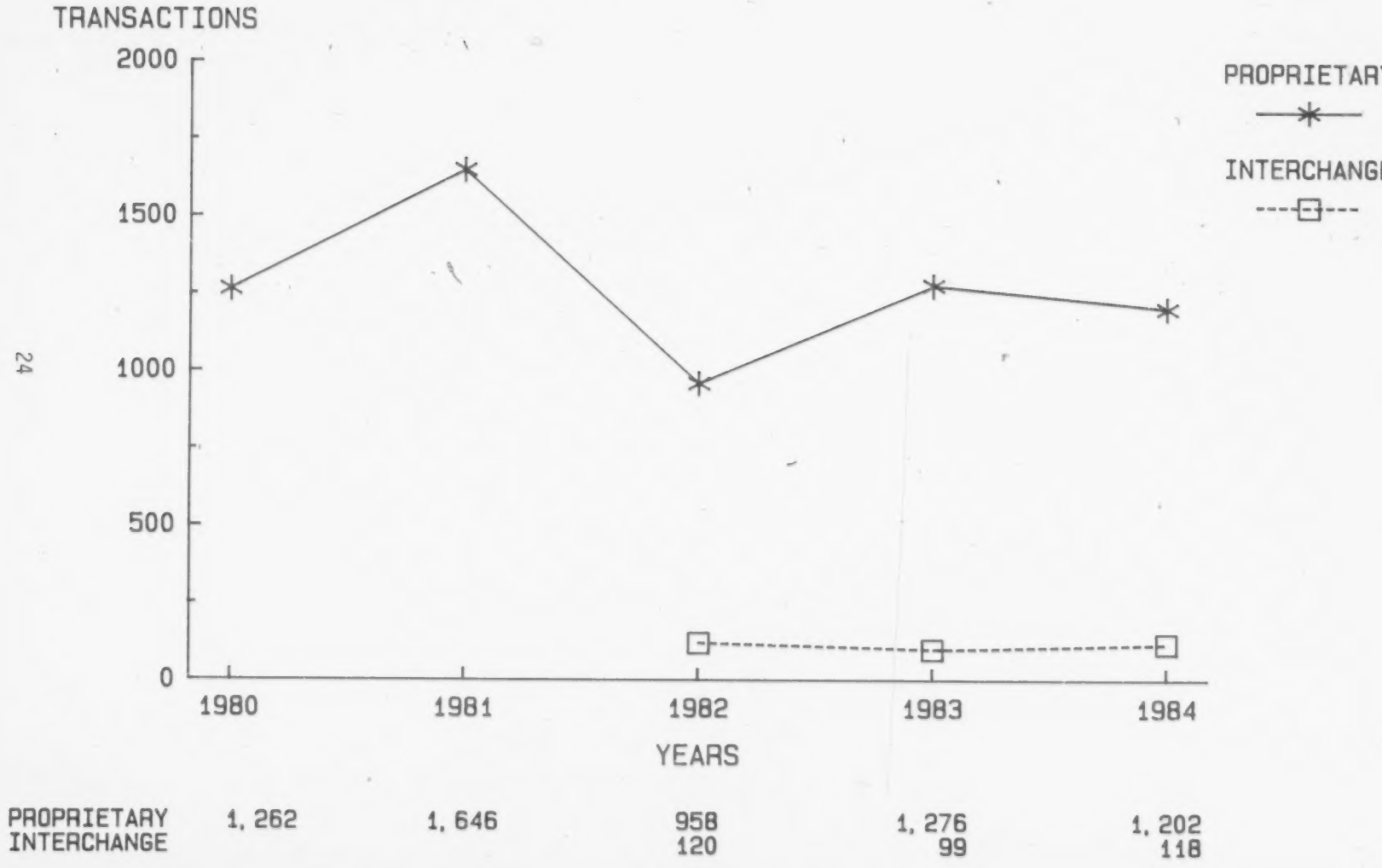
Dollar Value of ATM Activity

ATMs continue as net deposit takers as the dollars deposited to dollars withdrawn ratio at a proprietary ATM increased in 1984 for the third consecutive year. By multiplying the average dollar amounts by the average transaction volume, the ratio of dollars deposited to dollars withdrawn can be calculated.

1984 = 1.92 to 1 1983 = 1.80 to 1 1982 = 1.64 to 1

Interchange dollars deposited to dollars withdrawn continues to decline. This is natural as sharing expands across the political borders that currently prohibit deposit taking.

1984 = 0.78 to 1 1983 = 2.30 to 1 1982 = 1.13 to 1



	1980	1981	1982	1983	1984
PROPRIETARY	1,262	1,646	958	1,276	1,202
INTERCHANGE			120	99	118

Figure 8
Average Volume per Week per ATM

Transactions per ATM Locations

Overall, transactions at banks' main offices have declined since 1983, with only the lobby ATM increasing to 430 transactions in 1984 from 423 transactions in 1983. However, ATMs located at a branch office increased over 1983 in average transactions. The 667 transactions at a drive-up unit represented a 170 percent increase from the 1983 data. Activity at these units is now very competitive with the more traditional vestibule and through-the-wall units.

Units at an off-premise location are the fastest growing segment of the delivery system, with college campuses still in the pole position for transaction volume. An interesting trend is the transaction mix-proprietary versus interchange transactions-occurring at main office drive-up units and units located at a grocery site. In both locations, this mix is approaching an equal split. In most other locations, interchange transactions account for only 12 percent of the total transactions. Figures 9a,9b, and 9c illustrate the transaction volume and transaction mix.

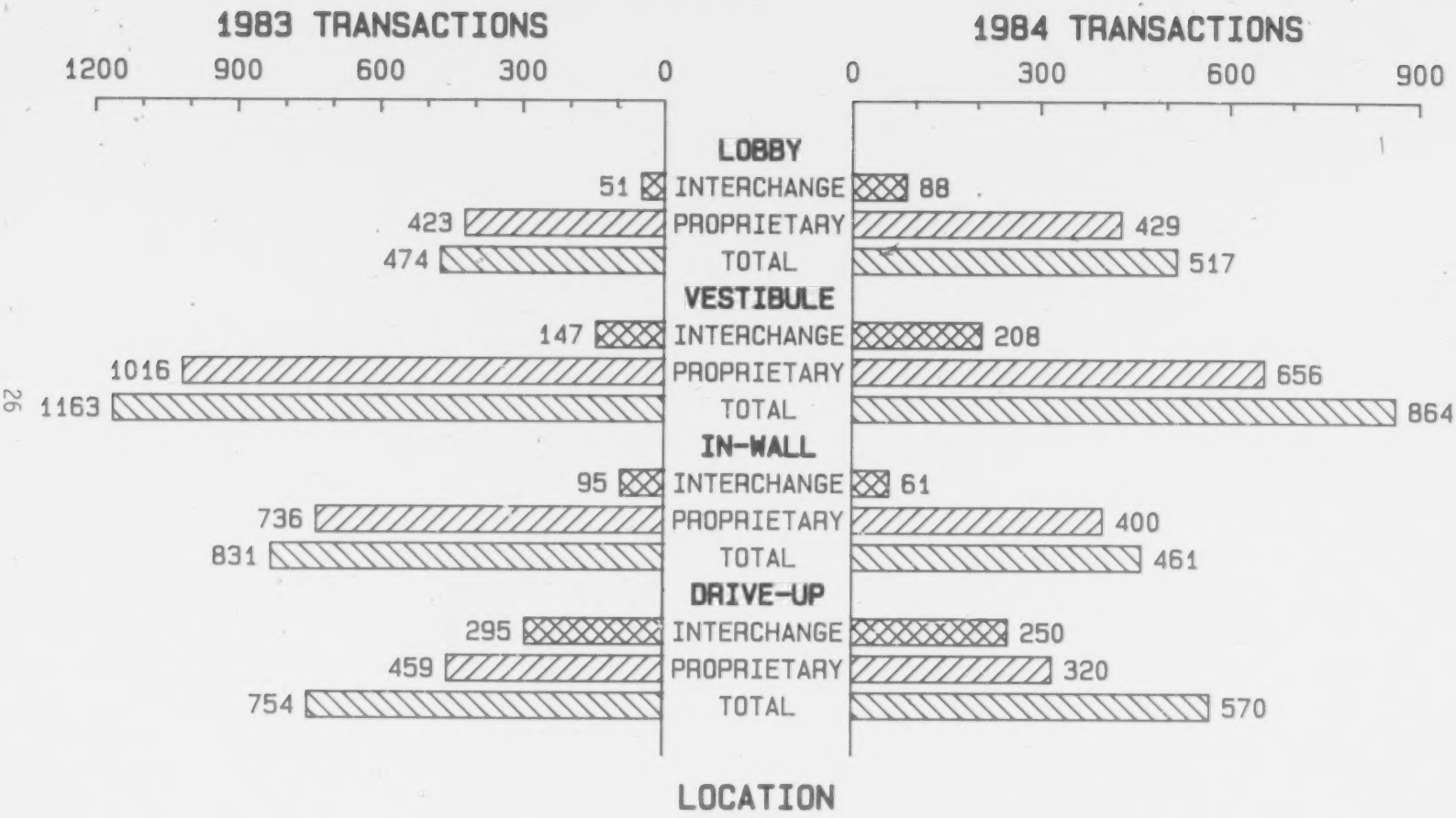


Figure 9a
Transactions per ATM Location
Main Office Location

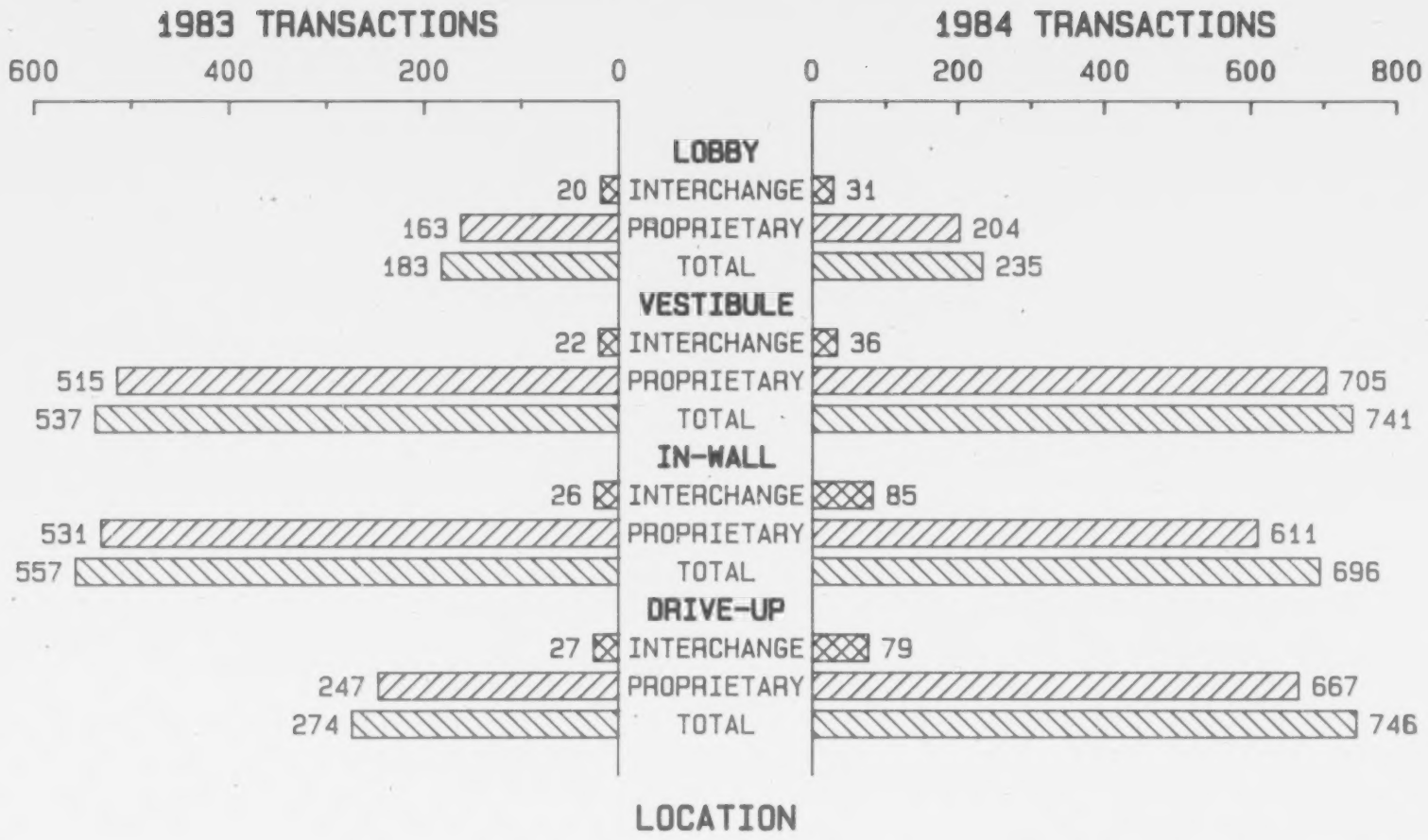


Figure 9b
Transactions per ATM Location
Branch Office Location

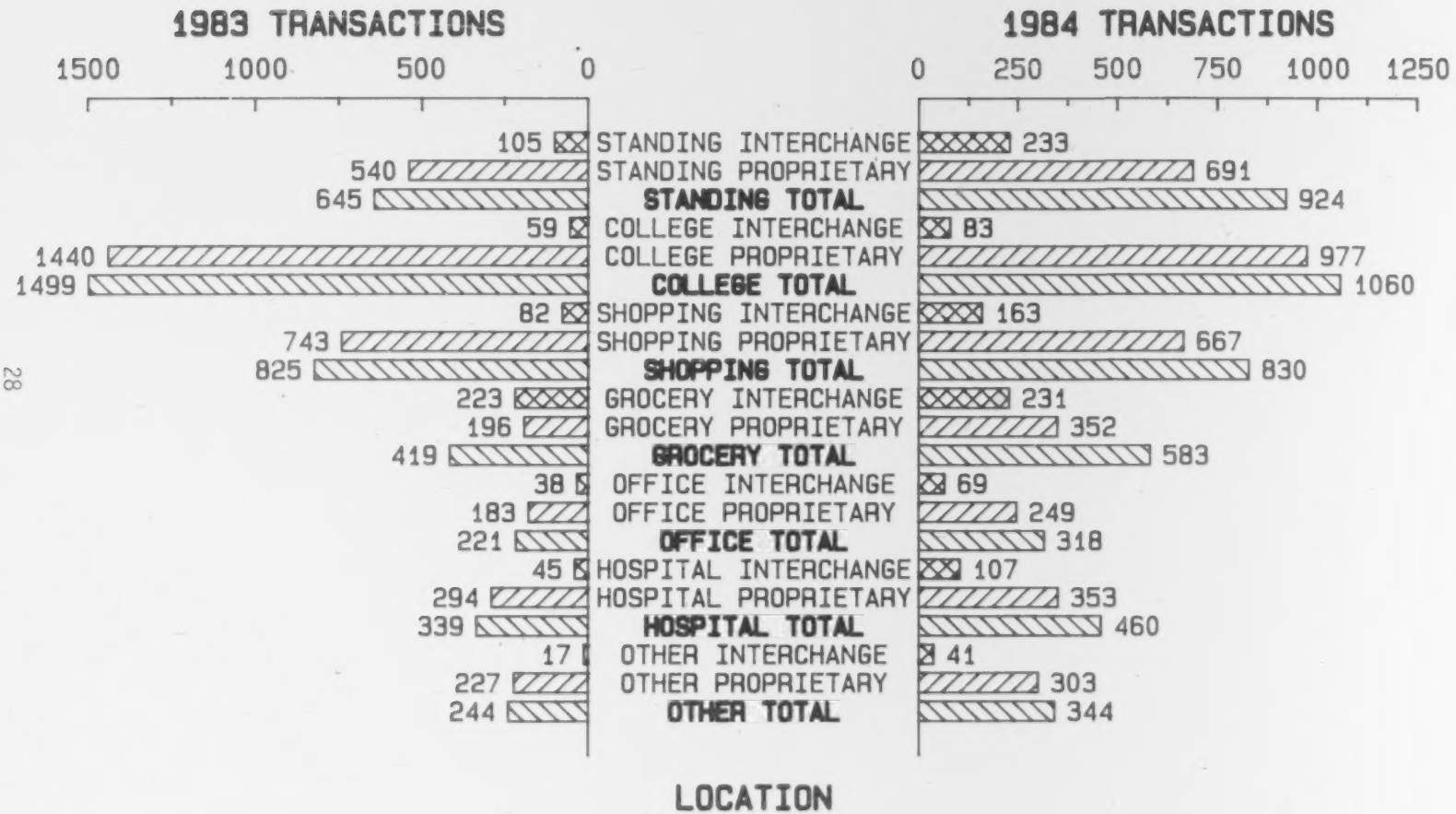
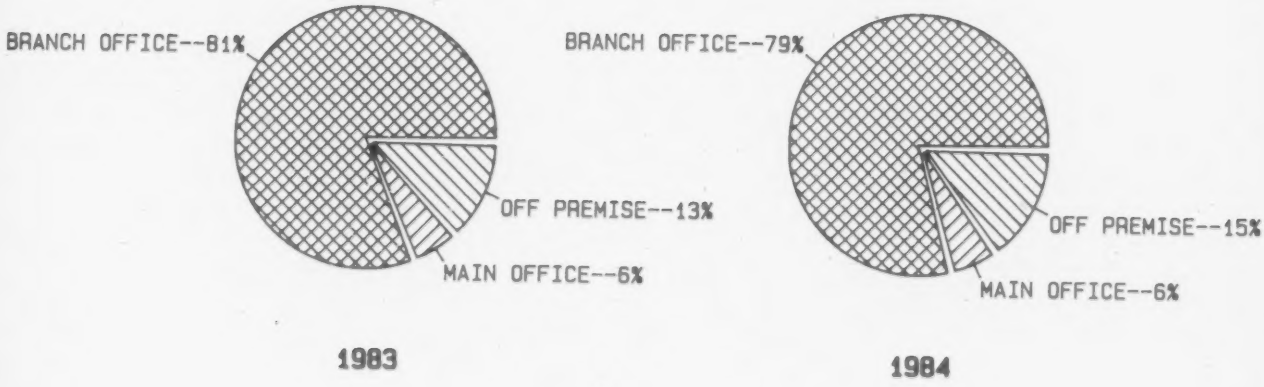


Figure 9c
Transactions per ATM Location
Off-Premise Location

ATM Units by Area

As a percentage, the proportion of units installed has shifted upward at off-premise locations. A 13 percent increase, or two percentage points, in off-premise locations is reported, while the percentage of branch locations has decreased since 1983. The grocery store, with a 32 percent increase, was among the fastest growing sites for ATM units in 1984. At banks, branch lobby ATMs were the fastest growing location, accounting for a 86 percent increase while through-the-wall units saw a decline of 18 percent. Figure 10 compares 1983 and 1984 ATM unit placement.

Figure 10
ATM Units by Area



ATM Installation Plans

The 1984 data indicate 68 percent of the respondents will install new ATMs or cash dispensers in 1985. Within this plan, one in every four machine will be a cash dispenser. The units (97 percent) will be placed at off-premise sites, primarily at grocery stores (38 percent) and at office buildings (44 percent). The total percentage of units, both ATMs and cash dispensers, planned for off-premise locations is 46.6 percent.

Less than 2 percent of the installations planned are for units at a main office. The balance, or 51.9 percent, will be located at branches. It is interesting that 28 percent of the ATMs will be through-the-wall units.

INSTALLATION PLAN FOR 1985

Main Office--Overall Average

Location	ATM	Cash Dispenser	
Lobby	.7%	0	
Vestibule	0	0	
Through-the-Wall	.2%	0	
Drive-up	.6%	0	
Total			1.5%

Branch Office--Overall Average

Location	ATM	Cash Dispenser	
Lobby	11.3%	.4%	
Vestibule	8.4%	.4%	
Through-the-Wall	21.4%	.2%	
Drive-up	9.8%	0	
Total			51.9%

Off Premise--Overall Average

Location	ATM	Cash Dispenser	
Free-Standing	5.0%	.4%	
College	1.5%	.2%	
Shopping Center	2.5%	1.2%	
Grocery	7.8%	9.2%	
Office	3.4%	10.6%	
Hospital	1.3%	.6%	
Other	2.1%	.8%	
Total			46.6%

On-Line Versus Off-Line

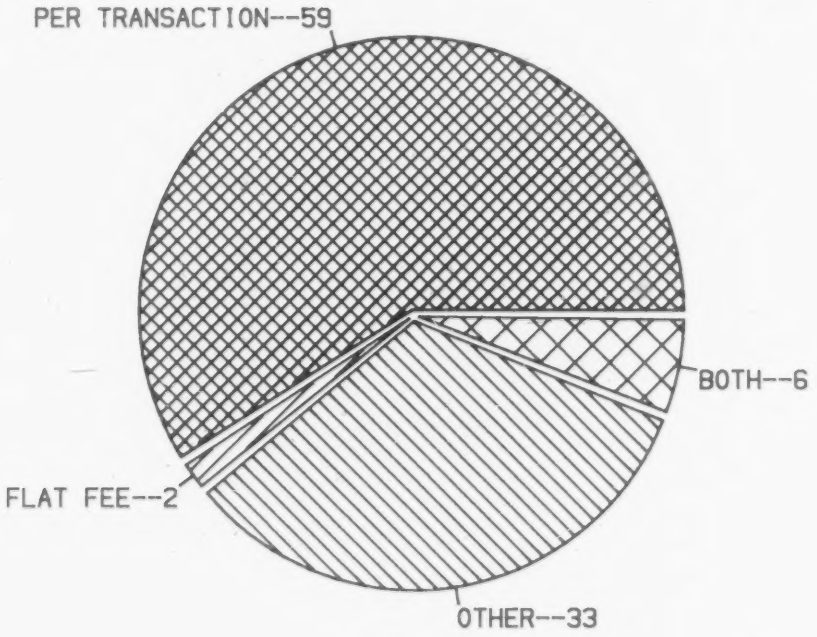
The Chicago geographic area remains the primary region to maintain a high percentage of off-line activity, because Illinois continues as a unit banking state with restrictive branching laws and most banks can not justify on-line support to their data base. The presence of national sharing may change this trend. Table 18 provides the on-line details from the survey.

ATM Service Charges

Almost half (42.4%) of the responding financial institutions levy some form of a service charge for using an ATM. Of those that charge, 59 percent do so per transaction and 33 percent charge only if the deposit account falls below a specific balance. In more than 90 percent of the banks, the item fee is less than or equal to the item fee for a check. Figure 11 illustrates ATM service charge methonds.

Figure 11
ATM Service Charge

Figure 11



Access Cards

The percentage of active cards in 1984 has remained stable in comparison with 1983 data. In both years, the percentage of active cards has surpassed the so-called 33 percent wall. The 33 percent wall is a general term used to describe an institution's inability to activate more than one-third of its debit card base. Table 22 provides a breakdown by geographic area, and shows that the percentage of active cards ranges from 30 percent to 58 percent. The average for 1984 is 41.7 percent.

The 41.7 percent average for active cards is high when compared to other BAI research. During this same period, a national telephone survey was conducted and, results indicated only 31.9 percent of the population had used an ATM in the past year. This seems to indicate that customers of the larger ($250 million or more in assets) commerical banks are more active users of ATMs than the general population.

TABLE 8
PERCENTAGE OF PROPRIETARY ATM TRANSACTIONS BY TYPE OF AREA

Area	Cash Withdrawals from Checking+ 1982	1983	1984	Cash Withdrawals from Savings± 1982	1983	1984
Boston	59.8%	50.5%	47.9%	9.3%	10.1%	12.5%
New York	41.9	32.8	40.9	8.9	10.0	10.9
Philadelphia	45.5	43.1	45.7	12.3	15.3	14.8
Pittsburgh	51.5	49.1	57.0	9.8	7.6	6.2
Washington, D.C.	50.5	51.0	48.1	6.9	6.5	5.3
Atlanta	55.1	56.5	58.9	6.0	6.8	5.9
Chicago	56.8	64.3	49.8	8.0	5.9	8.8
Cleveland	47.7	41.3	39.2	12.8	13.6	12.5
Detroit	44.8	43.1	44.8	16.3	9.7	11.2
Minneapolis/St. Paul	68.9	55.4	62.3	6.6	11.2	7.3
St. Louis	52.0	53.6	54.7	6.1	4.8	5.4
Dallas	49.5	59.3	57.8	2.4	4.6	3.6
Houston	58.1	56.6	62.2	4.3	4.9	6.3
Los Angeles	57.0	58.4	60.2	5.3	6.7	4.6
San Francisco	62.8	53.7	64.0	4.8	4.6	7.2
Denver	64.5	57.7	31.8	4.0	6.8	14.1
Average	52.5%	51.0%	50.3%	8.0%	7.8%	8.5%
Median	52.9%	52.6%	53.8%	6.2%	7.0%	7.8%

*No respondents; $\frac{+Q25}{Q34} \times 100$; $\frac{\pm Q26}{Q34} \times 100$; $\frac{\S Q27}{Q34} \times 100$; $\frac{^{\circ}Q28}{Q34} \times 100$;

$\frac{\#Q29}{Q34} \times 100$; $\frac{++Q30}{Q34} \times 100$; $\frac{\S\S Q31}{Q34} \times 100$; $\frac{^{\circ\circ}Q32}{Q34} \times 100$; $\frac{\#\#Q33}{Q34} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 8 on the following pages.

TABLE 8 (Continued)

Area	Cash Withdrawals From Credit Cards§ 1982	1983	1984	Balance Inquiries° 1982	1983	1984
Boston	0.4%	0.2%	0.2%	18.2%	20.6%	24.1%
New York	0.7	0.9	0.8	34.4	41.8	32.3
Philadelphia	0.5	1.5	1.0	20.9	15.3	15.6
Pittsburgh	1.0	1.2	0.0	21.9	24.5	9.4
Washington, D.C.	2.0	1.7	1.2	27.6	26.7	23.5
Atlanta	0.8	0.6	0.8	24.8	22.7	23.2
Chicago	0.5	0.7	0.2	12.6	3.8	17.4
Cleveland	1.4	0.9	0.5	21.2	25.5	24.6
Detroit	6.4	0.4	0.3	15.5	22.5	22.8
Minneapolis/St. Paul	0.3	0.6	0.0	10.2	20.1	15.3
St. Louis	0.9	0.9	1.7	26.7	27.4	24.6
Dallas	0.1	0.1	0.3	29.7	26.2	21.6
Houston	0.1	0.0	0.0	28.3	32.0	23.0
Los Angeles	0.8	1.0	1.1	20.2	20.6	17.5
San Francisco	0.5	0.4	1.9	16.9	24.1	16.3
Denver	1.3	2.2	8.9	18.5	20.4	10.4
Average	0.7%	0.8%	1.1%	23.3%	24.0%	22.7%
Median	0.4%	0.3%	0.4%	22.9%	22.7%	19.6%

Area	Transfers # 1982	1983	1984	Checking Deposits++ 1982	1983	1984
Boston	2.3%	2.1%	2.2%	8.8%	12.3%	10.0%
New York	1.7	2.8	2.9	10.3	8.3	9.2
Philadelphia	2.3	2.8	5.2	13.1	15.3	14.2
Pittsburgh	1.9	1.9	1.4	11.7	11.3	19.2
Washington, D.C.	1.6	2.0	2.3	9.9	9.3	8.9
Atlanta	1.6	1.6	1.4	9.1	8.1	8.5
Chicago	8.6	2.3	3.7	11.9	18.6	12.7
Cleveland	2.5	2.7	1.9	10.4	11.1	13.3
Detroit	3.0	2.7	2.9	10.3	14.4	14.1
Minneapolis/St. Paul	2.4	3.5	3.1	10.6	8.2	11.0
St. Louis	2.3	1.9	1.9	9.4	8.3	9.5
Dallas	0.8	0.9	1.6	8.6	7.2	14.2
Houston	1.0	1.0	1.5	7.1	5.3	6.9
Los Angeles	1.4	1.6	2.8	12.8	9.8	11.3
San Francisco	1.7	1.5	1.5	12.4	14.9	8.5
Denver	1.9	1.8	2.5	9.1	10.3	20.3
Average	2.2%	2.0%	2.4%	10.8%	11.2%	10.5%
Median	1.8%	1.9%	2.1%	10.0%	10.7%	10.6%

TABLE 8 (Continued)

Area	Savings Deposits§§ 1982	1983	1984	Bill Payments°° 1982	1983	1984
Boston	0.9%	2.2%	2.2%	0.1%	0.6%	0.3%
New York	1.9	2.0	2.3	0.9	0.9	0.4
Philadelphia	2.4	3.4	1.2	0.6	0.5	0.4
Pittsburgh	1.4	1.0	1.3	0.3	0.4	0.4
Washington, D.C.	0.6	0.8	0.7	0.7	0.4	0.5
Atlanta	0.6	0.6	0.4	0.2	0.3	0.2
Chicago	1.3	1.7	2.0	1.3	2.7	1.3
Cleveland	1.7	2.5	2.9	1.2	1.6	2.4
Detroit	2.3	2.1	2.1	1.3	1.1	1.1
Minneapolis/St. Paul	0.8	0.9	0.8	0.2	0.1	0.4
St. Louis	1.7	1.4	0.7	0.3	0.9	0.4
Dallas	0.3	0.3	0.5	0.4	0.4	0.4
Houston	0.3	0.2	0.2	0.1	0.0	0.0
Los Angeles	0.8	0.5	0.4	0.5	0.2	0.5
San Francisco	0.6	0.7	0.4	0.3	0.1	0.1
Denver	0.4	0.6	9.5	0.2	0.2	0.3
Average	1.3%	1.3%	1.4%	0.5%	0.5%	0.5%
Median	0.8%	0.9%	0.8%	0.3%	0.3%	0.3%

Area	Other ATM Transactions## 1982	1983	1984
Boston	0.0%	1.4%	0.7%
New York	0.3	0.5	0.3
Philadelphia	2.3	2.8	2.0
Pittsburgh	0.4	3.0	5.0
Washington, D.C.	0.2	1.6	9.6
Atlanta	1.6	2.8	0.7
Chicago	0.4	0.0	4.0
Cleveland	1.0	0.8	2.8
Detroit	2.7	4.0	0.7
Minneapolis/St. Paul	0.0	0.0	0.0
St. Louis	0.7	0.8	1.1
Dallas	8.3	1.0	0.1
Houston	0.7	0.0	0.0
Los Angeles	1.3	1.2	1.5
San Francisco	0.0	0.0	0.1
Denver	0.0	0.0	2.2
Average	1.3%	1.4%	2.6%
Median	0.0%	0.0%	0.0%

TABLE 9
PERCENTAGE OF INTERCHANGE ATM TRANSACTIONS BY TYPE BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±			Cash Withdrawals from Credit Cards§		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	100.0%	68.0%	60.0%	0.0%	2.4%	13.7%	0.0%	0.0%	0.1%
New York	51.0	69.2	44.8	6.7	7.7	8.9	16.7	0.0	1.9
Philadelphia	54.1	49.1	50.9	13.2	14.7	9.3	1.0	2.1	9.9
Pittsburgh	0.0	54.9	63.9	0.0	10.1	12.6	0.0	0.4	0.0
Washington, D.C.	56.5	76.1	77.4	7.9	10.3	9.4	0.0	0.5	1.3
Atlanta	62.2	58.6	71.6	8.1	10.5	5.6	0.2	0.1	1.1
Chicago	65.3	42.0	56.0	9.1	9.4	8.6	0.6	0.6	0.0
Cleveland	54.2	52.0	46.7	20.4	21.5	13.7	1.1	0.0	0.5
Detroit	41.5	45.8	71.8	28.2	9.8	8.9	0.2	0.1	0.2
Minneapolis/St. Paul	97.2	59.2	88.6	0.1	10.0	2.7	2.0	1.4	0.0
St. Louis	79.2	71.6	70.2	4.9	5.7	1.9	0.1	0.1	0.6
Dallas	62.5	51.6	67.1	6.6	5.6	10.3	0.1	0.1	0.9
Houston	66.1	61.1	65.0	5.9	4.4	6.1	0.0	0.0	13.3
Los Angeles	59.6	68.0	72.2	12.8	12.4	4.2	2.1	0.8	1.2
San Francisco	79.3	68.1	71.3	6.8	8.0	11.4	2.1	0.3	1.1
Denver	57.3	56.4	23.9	4.9	8.6	12.3	4.8	3.3	6.2
Average	58.3%	53.8%	59.7%	12.3%	9.6%	9.0%	1.2%	0.7%	2.7%
Median	61.0%	58.4%	60.0%	4.8%	8.9%	10.0%	0.0%	0.0%	0.0%

$^{+}\frac{Q41}{Q50} \times 100$; $^{\pm}\frac{Q42}{Q50} \times 100$; $^{\S}\frac{Q43}{Q50} \times 100$; $^{\circ}\frac{Q44}{Q50} \times 100$; $^{\#}\frac{Q45}{Q50} \times 100$; $^{++}\frac{Q46}{Q50} \times 100$;

$^{\S\S}\frac{Q47}{Q50} \times 100$; $^{\circ\circ}\frac{Q48}{Q50} \times 100$; $^{\#\#}\frac{Q49}{Q50} \times 100$

Note: The preceding footnotes also pertain to the continuation of Table 9 on the following page.

TABLE 9 (Continued)

Area	Balance Inquiries°			Transfers #			Checking Deposits++		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0.0%	24.4%	21.4%	0.0%	1.0%	1.5%	0.0%	3.3%	2.7%
New York	25.7	23.1	30.2	0.0	0.0	0.6	0.0	0.0	0.0
Philadelphia	13.0	22.6	15.0	4.3	1.5	1.2	11.9	7.9	6.1
Pittsburgh	0.0	24.4	9.4	0.0	1.9	0.0	0.0	7.4	0.0
Washington, D.C.	35.6	13.1	11.3	0.0	0.0	0.1	0.0	0.0	0.5
Atlanta	24.5	25.7	12.6	0.5	0.6	0.3	4.0	3.8	0.3
Chicago	7.1	3.4	14.7	1.5	3.2	2.7	13.5	10.6	13.0
Cleveland	6.8	1.2	18.0	2.5	3.4	1.3	13.2	18.9	13.2
Detroit	7.0	6.2	0.0	2.7	2.0	2.6	14.1	22.5	15.5
Minneapolis/St. Paul	0.0	18.0	2.0	0.0	3.1	0.6	0.6	7.3	6.0
St. Louis	10.0	5.8	16.7	1.0	0.9	0.6	4.5	15.4	9.8
Dallas	21.9	25.9	18.8	0.9	1.0	0.6	5.4	8.5	2.2
Houston	24.3	34.2	15.1	0.6	0.3	0.5	2.8	0.0	0.0
Los Angeles	14.3	15.3	9.2	0.8	1.7	0.3	9.4	0.4	3.2
San Francisco	2.9	2.2	13.6	0.7	7.8	0.5	12.8	12.7	2.0
Denver	21.3	19.9	14.4	1.2	1.0	3.1	9.7	10.2	15.4
Average	15.8%	19.9%	14.6%	1.3%	1.5%	1.2%	8.2%	8.6%	6.7%
Median	11.3%	15.4%	10.0%	1.0%	0.6%	0.0%	7.1%	3.9%	0.0%

Area	Savings Deposits§§			Bill Payments°°			Other ATM Transactions		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0.0%	0.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	1.6	1.5	0.6	0.3	0.4	0.0	0.5	0.2	6.9
Pittsburgh	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	14.1
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.4	0.6	0.0	0.0	0.1	0.0	0.0	0.0	8.6
Chicago	1.3	1.8	1.5	0.1	0.6	0.0	1.6	28.4	3.5
Cleveland	1.7	3.0	2.3	0.0	0.0	0.0	0.0	0.0	4.3
Detroit	3.2	1.2	1.0	0.3	0.2	0.0	6.0	12.2	0.0
Minneapolis/St. Paul	0.0	0.8	1.0	0.0	0.2	0.0	0.0	0.0	0.0
St. Louis	0.2	0.5	1.0	0.0	0.0	0.0	0.1	0.0	0.0
Dallas	0.2	0.4	2.0	0.0	0.1	0.0	2.5	6.8	0.0
Houston	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Los Angeles	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4	9.7
San Francisco	0.0	0.9	0.1	1.2	0.0	0.0	0.1	0.0	0.0
Denver	0.5	0.6	10.0	0.2	0.0	0.0	0.0	0.0	14.6
Average	1.1%	0.8%	1.2%	0.1%	0.2%	0.0%	1.8%	4.9%	4.6%
Median	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 10

AVERAGE DOLLAR VALUE OF PROPRIETARY ATM TRANSACTIONS BY AREA

Area	Cash Withdrawals from Checking+ 1982	1983	1984	Cash Withdrawals from Savings± 1982	1983	1984
Boston	$43	$52	$59	$41	$54	$ 51
New York	50	59	72	57	59	72
Philadelphia	59	61	58	60	58	56
Pittsburgh	43	47	52	44	45	50
Washington, D.C.	43	42	46	44	50	54
Atlanta	35	32	40	39	67	47
Chicago	47	45	54	56	37	66
Cleveland	39	32	50	35	31	49
Detroit	43	53	53	47	48	48
Minneapolis/St. Paul	31	0	34	32	0	34
St. Louis	38	37	42	47	43	50
Dallas	46	25	32	88	39	41
Houston	40	44	41	49	53	54
Los Angeles	45	45	56	52	49	116
San Francisco	55	48	44	64	51	46
Denver	37	24	37	41	31	25
Average	$41	$43	$50	$63	$52	$ 56
Median	$42	$47	$48	$46	$50	$ 51

*No respondents: +Q35/Q25; ±Q36/Q26; §Q37/Q27; °Q38/Q30; #Q39/Q31; ±±Q40/Q32.

Note: The preceding footnotes also pertain to the continuation of Table 10 on the following page.

TABLE 10 (Continued)

Area	Cash Withdrawals from Credit Cards§§ 1982	1983	1984	Checking Deposits° 1982	1983	1984
Boston	$ 51	$ 55	$ 74	$335	$206	$315
New York	59	63	78	276	552	526
Philadelphia	58	69	65	408	489	469
Pittsburgh	51	53	0	306	353	512
Washington, D.C.	57	57	64	372	383	360
Atlanta	47	108	61	359	360	335
Chicago	68	53	65	545	795	527
Cleveland	45	32	57	340	252	365
Detroit	44	59	54	322	365	401
Minneapolis/St. Paul	50	0	0	358	0	404
St. Louis	79	69	37	308	302	362
Dallas	0	0	12	458	120	342
Houston	62	0	0	321	339	332
Los Angeles	54	52	60	371	375	288
San Francisco	52	53	43	370	473	2900
Denver	63	27	24	399	173	123
Average	$ 55	$ 63	$ 53	$397	$399	$523
Median	$ 52	$ 54	$ 62	$345	$ 46	$ 48

Area	Savings Deposits # 1982	1983	1984	Bill Payments†† 1982	1983	1984
Boston	$232	$211	$265	$169	$109	$170
New York	218	271	437	172	127	298
Philadelphia	259	360	293	440	596	229
Pittsburgh	240	233	188	173	175	173
Washington, D.C.	326	344	423	113	128	97
Atlanta	415	264	458	146	136	188
Chicago	424	282	564	181	100	143
Cleveland	184	158	229	121	100	151
Detroit	253	260	214	159	78	428
Minneapolis/St. Paul	168	0	526	230	0	204
St. Louis	262	353	335	106	111	149
Dallas	170	176	295	119	2	35
Houston	223	235	83	140	32	99
Los Angeles	350	588	669	197	120	168
San Francisco	328	470	361	144	118	111
Denver	301	88	45	257	0	223
Average	$301	$309	$310	$188	$152	$175
Median	$256	$256	$ 51	$142	$ 56	$ 65

TABLE 11
AVERAGE DOLLAR VALUE OF INTERCHANGE ATM TRANSACTIONS BY AREA

Area	Cash Withdrawals from Checking+			Cash Withdrawals from Savings±			Cash Withdrawals from Credit Cards§		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	$40	$47	$52	$ 0	$54	$46	$30	$ 0	$49
New York	46	38	50	30	18	44	30	0	79
Philadelphia	55	50	56	60	56	48	48	55	54
Pittsburgh	0	39	37	0	39	34	0	65	100
Washington, D.C.	38	41	43	42	49	43	0	45	35
Atlanta	30	36	34	39	21	37	41	95	52
Chicago	52	9	46	53	11	72	47	7	63
Cleveland	38	40	42	36	39	48	35	0	59
Detroit	48	64	47	47	57	58	78	60	65
Minneapolis/St. Paul	29	0	32	29	0	33	0	0	0
St. Louis	37	38	40	39	43	43	10	36	57
Dallas	44	38	39	50	29	28	69	44	53
Houston	33	56	43	40	51	69	50	0	97
Los Angeles	39	50	78	34	54	74	44	51	22
San Francisco	58	61	58	82	57	70	34	35	58
Denver	38	33	58	38	32	29	46	48	54
Average	$43	$43	$45	$51	$44	$45	$50	$51	$54
Median	$40	$42	$43	$42	$44	$46	$42	$52	$55

Area	Checking Deposits°			Savings Deposits #			Bill Payments++		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	$ 0	$479	$273	$ 0	$285	$246	$ 0	$ 0	$ 0
New York	0	0	0	0	0	0	0	0	0
Philadelphia	408	372	381	258	269	367	83	135	135
Pittsburgh	0	235	0	0	199	0	0	0	0
Washington, D.C.	0	0	378	0	0	0	0	0	62
Atlanta	395	261	423	230	150	165	120	264	156
Chicago	385	395	442	258	111	401	100	61	0
Cleveland	315	267	290	227	240	234	0	204	82
Detroit	240	1597	413	224	360	344	197	153	0
Minneapolis/St. Paul	354	0	545	702	0	527	0	0	0
St. Louis	408	419	397	307	176	412	227	385	96
Dallas	480	490	458	394	316	280	113	158	0
Houston	330	0	0	141	0	0	115	0	0
Los Angeles	475	856	1195	335	0	0	0	0	0
San Francisco	534	1814	350	0	609	10	171	0	0
Denver	387	486	58	186	365	30	233	0	0
Average	$375	$709	$342	$278	$264	$167	$171	$135	$109
Median	$382	$ 37	$ 37	$237	$ 34	$ 39	$143	$ 30	$ 22

+$\frac{Q51}{Q41}$ x 100; ±$\frac{Q52}{Q42}$ x 100; §$\frac{Q53}{Q43}$ x 100; °$\frac{Q54}{Q46}$ x 100; #$\frac{Q55}{Q47}$ x 100; ++$\frac{Q56}{Q48}$ x 100;

TABLE 12
AVERAGE WEEKLY PROPRIETARY TRANSACTIONS PER ATM UNIT BY AREA

Area	Cash Withdrawals from Checking+ 1982	1983	1984	Cash Withdrawals from Savings± 1982	1983	1984
Boston	598.4	546.6	543.5	93.4	109.1	142.4
New York	418.8	369.4	499.0	88.5	114.6	130.0
Philadelphia	455.4	405.9	488.8	123.3	137.9	131.5
Pittsburgh	514.9	518.5	723.0	98.0	80.7	78.3
Washington, D.C.	504.8	695.7	864.8	69.1	89.2	88.2
Atlanta	551.5	834.5	674.5	60.2	100.7	67.8
Chicago	568.1	377.5	385.4	79.8	34.7	68.4
Cleveland	477.1	607.9	627.3	128.3	200.1	199.7
Detroit	488.3	257.5	268.2	163.3	58.1	66.9
Minneapolis/St. Paul	689.5	491.5	207.5	66.4	99.3	24.3
St. Louis	519.6	1,454.6	531.9	61.0	129.2	52.7
Dallas	495.2	469.7	648.0	23.5	36.7	40.4
Houston	580.9	550.2	483.0	42.9	47.4	48.7
Los Angeles	569.6	834.6	722.9	53.2	95.3	54.8
San Francisco	628.0	727.1	738.5	48.1	61.7	83.2
Denver	644.9	682.7	423.6	39.9	80.3	187.5
Average	541.5	654.6	616.9	77.4	95.8	97.2
Median	554.1	611.5	557.2	53.9	69.2	73.5

*No respondents; $^{+Q25}/_{Q72}$; $^{\pm Q26}/_{Q72}$; $^{\S Q27}/_{Q72}$; $^{\circ Q28}/_{Q72}$;

$^{\#Q29}/_{Q72}$; $^{\pm\pm Q30}/_{Q72}$; $^{\S\S Q31}/_{Q72}$; $^{\circ\circ Q32}/_{Q72}$; $^{\#\#Q33}/_{Q72}$; $^{***Q34}/_{Q72}$.

Note: The preceding foonotes also pertain to the continuation of Table 12 on the following pages.

TABLE 12 (Continued)

Area	Cash Withdrawals from Credit Cards§§ 1982	1983	1984	Balance Inquiries° 1982	1983	1984
Boston	4.4	1.6	2.0	181.6	222.8	273.1
New York	6.8	10.7	11.9	344.1	473.3	368.8
Philadelphia	4.9	3.1	7.1	209.2	181.9	193.0
Pittsburgh	9.8	11.2	0.0	219.2	259.2	119.8
Washington, D.C.	19.6	23.6	19.8	276.4	364.5	358.1
Atlanta	8.2	9.2	8.8	247.9	336.2	265.8
Chicago	4.7	3.8	1.8	125.7	22.2	134.5
Cleveland	14.4	12.9	7.5	212.2	374.7	394.1
Detroit	63.8	1.8	2.0	155.3	134.9	136.5
Minneapolis/St. Paul	2.8	6.3	0.0	101.9	178.2	51.0
St. Louis	8.6	22.3	16.2	266.9	743.9	239.4
Dallas	0.6	0.7	3.1	297.0	207.5	242.7
Houston	1.2	0.0	0.0	282.5	311.7	178.3
Los Angeles	7.8	14.5	13.5	201.9	294.1	210.7
San Francisco	5.3	5.2	22.0	168.8	326.2	187.7
Denver	13.3	25.5	119.0	185.3	241.2	139.0
Average	11.0	9.5	13.0	217.2	312.8	266.7
Median	7.9	4.3	2.8	216.4	224.0	186.9

Area	Transfers # 1982	1983	1984	Checking Deposits++ 1982	1983	1984
Boston	23.4	22.8	24.7	88.3	133.2	113.0
New York	17.3	31.3	37.6	103.0	94.9	116.0
Philadelphia	23.0	30.6	27.9	131.2	115.8	115.0
Pittsburgh	19.5	20.1	18.3	117.0	119.3	243.5
Washington, D.C.	16.0	27.5	38.8	98.9	126.3	148.3
Atlanta	16.5	23.5	15.9	91.3	119.8	97.8
Chicago	86.5	13.8	28.4	119.1	109.3	97.8
Cleveland	25.2	39.6	30.7	104.4	163.1	212.4
Detroit	29.6	16.4	17.2	103.5	86.3	84.1
Minneapolis/St. Paul	24.1	30.7	10.3	105.8	72.5	36.5
St. Louis	23.0	52.7	18.7	93.7	224.9	92.5
Dallas	8.3	6.9	17.8	85.6	56.8	159.0
Houston	10.0	9.3	11.5	70.8	51.9	53.3
Los Angeles	14.2	23.4	34.2	127.6	139.8	136.3
San Francisco	17.5	20.9	17.6	123.6	201.8	98.0
Denver	19.5	21.3	33.4	90.9	122.1	270.2
Average	2.4	24.8	25.7	103.4	138.8	123.2
Median	19.8	18.1	19.0	101.0	113.3	105.8

TABLE 12 (Continued)

Area	Savings Deposits§§ 1982	1983	1984	Bill Payments°° 1982	1983	1984
Boston	8.6	24.0	24.9	1.5	6.3	3.4
New York	19.2	23.2	28.7	8.5	8.0	5.5
Philadelphia	23.9	28.9	22.5	6.4	5.8	5.7
Pittsburgh	13.9	10.5	16.7	3.1	4.5	5.0
Washington, D.C.	6.4	10.3	9.5	7.1	5.9	7.3
Atlanta	6.4	9.2	5.0	2.5	3.5	2.1
Chicago	13.5	9.7	15.6	12.6	16.2	10.0
Cleveland	16.9	36.6	46.3	11.5	24.3	37.9
Detroit	23.5	12.6	12.7	12.8	6.7	6.5
Minneapolis/St. Paul	8.0	8.2	2.5	1.6	0.7	1.3
St. Louis	16.7	38.4	6.4	3.2	25.1	4.3
Dallas	3.3	2.4	5.3	3.9	3.8	4.4
Houston	3.3	1.7	1.2	1.1	0.3	0.3
Los Angeles	7.8	7.6	5.3	4.8	3.2	5.8
San Francisco	5.5	9.1	4.7	2.5	1.0	1.3
Denver	4.3	7.2	126.0	1.7	2.5	3.8
Average	11.1	14.9	16.9	4.5	6.2	6.8
Median	8.9	8.8	7.0	4.1	3.6	2.6

Area	Other ATM Transactions## 1982	1983	1984	Total ATM Transactions*** 1982	1983	1984
Boston	0.5	15.4	8.4	1,088.3	1,081.8	1,135.4
New York	3.4	5.9	5.1	1,009.6	1,131.3	1,202.6
Philadelphia	22.6	37.5	37.1	845.7	947.4	1,029.0
Pittsburgh	4.1	32.0	63.4	863.0	1,055.9	1,268.0
Washington, D.C.	1.7	21.5	198.3	704.0	1,364.7	1,733.0
Atlanta	15.6	41.6	8.2	1,000.1	1,478.1	1,145.8
Chicago	3.9	0.0	31.3	1,013.9	587.3	773.2
Cleveland	9.8	12.3	45.4	999.8	1,471.4	1,601.4
Detroit	26.9	23.8	4.0	1,027.0	598.3	598.1
Minneapolis/St. Paul	0.0	0.0	0.0	999.8	887.3	333.3
St. Louis	7.2	21.1	10.4	999.9	2,712.2	972.6
Dallas	82.7	8.2	0.8	1,000.0	792.6	1,121.5
Houston	7.3	0.0	0.0	1,000.0	972.6	776.3
Los Angeles	13.2	16.5	18.0	790.4	1,429.1	1,201.6
San Francisco	0.4	0.3	1.0	999.2	1,353.2	1,154.0
Denver	0.1	0.0	29.9	999.9	1,182.8	1,332.1
Average	12.5	18.7	35.1	958.8	1,276.0	1,201.6
Median	8.3	0.0	0.0	901.5	1,145.3	1,048.5

TABLE 13
AVERAGE WEEKLY INTERCHANGE TRANSACTIONS PER ATM UNIT BY AREA

Area	Cash Withdrawals Checking+			Cash Withdrawals Savings±			Cash Withdrawals Credit Cards§		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	118.4	16.4	44.8	0.0	0.6	10.2	0.0	0.0	0.1
New York	0.3	0.0	4.1	0.0	0.0	0.8	0.0	0.0	0.2
Philadelphia	120.3	158.2	166.4	44.3	47.5	30.5	7.4	6.7	32.4
Pittsburgh	0.0	53.4	153.2	0.0	9.8	30.1	0.0	0.4	0.0
Washington, D.C.	15.8	23.9	51.8	2.2	3.2	6.0	0.0	0.1	0.9
Atlanta	32.7	14.5	57.7	2.7	2.6	4.5	0.2	0.0	0.2
Chicago	157.6	112.6	241.4	31.5	25.2	36.9	2.0	1.5	0.2
Cleveland	44.1	5.5	74.0	21.5	2.3	21.8	1.1	0.0	0.8
Detroit	65.5	79.0	97.9	58.5	16.9	12.1	0.2	0.2	0.3
Minneapolis/St. Paul	130.1	586.5	537.0	0.2	99.3	16.5	1.0	14.3	0.0
St. Louis	99.3	67.1	84.9	15.7	5.4	2.3	0.0	0.1	0.8
Dallas	378.2	545.3	364.6	25.1	58.9	55.8	0.5	1.3	4.7
Houston	62.2	78.0	86.3	5.4	5.7	8.2	0.0	0.0	17.7
Los Angeles	173.4	72.3	23.7	51.3	13.2	1.4	0.9	0.0	0.4
San Francisco	159.8	3.7	1.6	0.0	0.4	0.3	0.7	0.1	0.0
Denver	203.0	24.1	92.5	12.7	3.7	47.6	19.2	1.4	24.1
Average	93.9	53.4	70.7	19.7	9.5	10.7	1.9	0.7	3.3
Median	84.1	2.1	32.2	5.3	0.0	1.4	0.0	0.0	0.0

Area	Balance Inquiries°			Transfers #			Checking Deposits++		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0.9	5.9	16.0	0.0	0.2	1.1	0.0	0.8	2.0
New York	0.2	0.0	2.8	0.0	0.0	0.1	0.0	0.0	0.0
Philadelphia	40.0	72.5	49.0	4.0	4.9	4.0	21.9	25.6	19.9
Pittsburgh	0.0	23.7	22.6	0.0	1.9	0.0	0.0	7.2	0.0
Washington, D.C.	9.9	4.1	6.8	0.0	0.0	0.1	0.0	0.0	0.4
Atlanta	18.6	6.4	10.1	0.5	0.2	0.2	3.6	0.9	0.2
Chicago	12.9	9.4	63.6	2.7	8.6	11.7	26.4	28.5	56.1
Cleveland	1.7	0.1	28.6	2.7	0.4	2.1	11.3	2.0	20.9
Detroit	2.2	10.7	0.0	3.8	3.4	3.5	26.4	38.7	21.1
Minneapolis/St. Paul	0.0	178.2	12.0	0.0	30.7	3.8	1.0	72.5	36.3
St. Louis	28.2	5.3	20.1	0.0	0.9	0.8	14.4	14.5	11.8
Dallas	186.4	273.6	102.0	11.0	10.5	3.0	54.9	89.6	12.2
Houston	23.4	43.4	20.0	0.5	0.4	0.7	1.2	0.0	0.0
Los Angeles	54.2	16.3	3.0	2.9	1.8	0.1	24.0	0.4	1.0
San Francisco	15.4	0.1	0.3	3.9	0.4	0.0	31.0	0.7	0.0
Denver	63.6	8.5	55.6	4.0	0.4	11.8	36.9	4.4	59.6
Average	19.7	19.7	17.2	1.7	1.5	1.4	14.2	8.6	8.0
Median	5.2	0.0	4.8	1.1	0.0	0.2	5.1	0.0	0.0

+Q41/Q72; ±Q42/Q72; §Q43/Q72; °Q44/Q72; #Q45/Q72; ++Q46/Q72; §§Q47/Q72; °°Q48/Q72; ##Q49/Q72; ***Q50/Q72.

Note: The preceding footnotes also pertain to the continuation of Table 13 on the following page.

TABLE 13 (Continued)

Area	Savings Deposits§§ 1982	1983	1984	Bill Payments°° 1982	1983	1984
Boston	0.0	0.2	0.4	0.0	0.0	0.0
New York	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	3.9	5.0	2.0	0.1	1.3	0.1
Pittsburgh	0.0	0.9	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.4	0.2	0.0	0.0	0.0	0.0
Chicago	3.7	4.9	6.3	0.3	1.5	0.0
Cleveland	1.9	0.3	3.6	0.0	0.0	0.0
Detroit	5.8	2.1	1.4	0.6	0.4	0.0
Minneapolis/St. Paul	0.0	8.2	0.8	0.0	0.7	0.0
St. Louis	0.7	0.4	0.2	0.0	0.0	0.0
Dallas	2.6	4.0	1.4	0.2	1.3	0.0
Houston	0.1	0.0	0.0	0.0	0.0	0.0
Los Angeles	5.7	0.0	0.0	0.0	0.0	0.0
San Francisco	0.0	0.0	0.0	0.7	0.0	0.0
Denver	1.4	0.2	38.8	1.2	0.0	0.0
Average	2.0	0.8	1.5	0.1	0.2	0.0
Median	0.3	0.0	0.0	0.0	0.0	0.0

Area	Other ATM Transactions## 1982	1983	1984	Total ATM Transactions*** 1982	1983	1984
Boston	0.0	0.0	0.0	118.3	24.1	74.7
New York	0.0	0.0	0.0	0.6	0.1	9.9
Philadelphia	0.6	0.8	22.7	242.7	322.5	327.0
Pittsburgh	0.0	0.0	33.8	0.0	97.4	239.0
Washington, D.C.	0.0	0.0	0.0	28.0	31.4	65.9
Atlanta	0.0	0.0	6.9	58.7	24.8	80.7
Chicago	3.1	76.1	15.0	240.2	268.2	431.3
Cleveland	0.0	0.0	6.8	84.2	10.6	158.6
Detroit	0.8	21.0	0.0	127.3	172.5	136.3
Minneapolis/St. Paul	0.0	0.0	0.0	132.4	990.3	606.3
St. Louis	0.3	0.0	0.0	160.8	93.7	120.9
Dallas	17.3	72.1	0.0	676.1	1056.6	543.8
Houston	0.0	0.0	0.0	92.7	127.6	132.8
Los Angeles	0.0	1.5	3.2	312.4	106.4	32.8
San Francisco	0.4	0.0	0.0	194.8	5.4	2.3
Denver	0.0	0.0	56.4	342.0	42.8	386.5
Average	2.3	4.9	5.4	119.5	99.2	118.3
Median	0.0	0.0	0.0	120.5	6.2	55.3

TABLE 14
NUMBER OF WEEKLY PROPRIETARY TRANSACTIONS PER ATM LOCATION BY AREA

Area	Main Office Units											
	Lobby+			Vestibule±			Through the Wall§			Drive-up°		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	1,595	129	44	1,664	1,606	0	3,018	0	200	0	0	0
New York	1,007	257	767	1,120	293	868	1,413	1,138	2,224	0	0	0
Philadelphia	876	430	1,576	1,358	1,690	0	695	783	517	0	0	0
Pittsburgh	0	226	0	0	0	0	0	827	0	0	0	0
Washington, D.C.	1,258	291	895	1,101	0	0	2,410	57	0	0	0	1,371
Atlanta	637	641	959	1,463	1,702	631	1,077	750	333	1,763	400	0
Chicago	681	767	414	1,374	0	1,622	604	0	129	0	0	0
Cleveland	508	170	658	733	653	446	688	911	813	0	0	0
Detroit	382	345	253	648	714	753	953	1,111	379	752	0	0
Minneapolis/St. Paul	1,394	0	272	0	0	0	370	0	388	0	0	0
St. Louis	853	273	76	1,213	1,062	188	353	628	308	0	0	0
Dallas	496	417	453	1,484	1,323	786	1,156	1,013	759	598	641	470
Houston	867	375	0	267	0	0	1,261	0	0	1,112	0	0
Los Angeles	863	815	925	0	0	0	1,217	2,420	2,482	376	0	0
San Francisco	0	156	243	0	3,161	1,630	462	251	449	0	0	0
Denver	457	199	279	732	77	645	968	155	0	0	832	892
Average	879	423	429	1,338	1,016	656	944	736	400	725	459	320
Median	696	211	337	1,060	716	168	812	170	143	675	0	0

+Q121/Q57; ±Q122/Q58; §Q123/Q59; °Q124/Q60; #Q125/Q61; ++Q126/Q62; ++Q127/Q63; §§Q128/Q64; °°Q129/Q65; ##Q130/Q66; +++Q131/Q67;

±±±Q132/Q68; §§§Q133/Q69; °°°Q134/Q70; ###Q135/Q71; ++++Q136/Q72.

Note: The preceding footnotes also pertain to the continuation of Table 14 on the following pages.

TABLE 14 (Continued)

Area	Branch Office Units: Lobby# 1982	Lobby# 1983	Lobby# 1984	Vestibule++ 1982	Vestibule++ 1983	Vestibule++ 1984	Through-the-Wall±± 1982	Through-the-Wall±± 1983	Through-the-Wall±± 1984	Drive-up§§ 1982	Drive-up§§ 1983	Drive-up§§ 1984
Boston	283	28	180	926	403	41	975	130	82	441	98	127
New York	366	126	226	887	515	948	777	1,437	1,268	429	1,076	956
Philadelphia	611	8	253	654	444	1,438	877	833	575	1,269	453	378
Pittsburgh	844	352	0	0	0	0	1,348	609	0	0	178	0
Washington, D.C.	397	698	98	471	371	1,187	700	167	619	862	109	515
Atlanta	369	78	190	696	181	1,498	985	1,205	598	668	349	525
Chicago	559	298	568	831	0	424	537	610	1,035	591	148	130
Cleveland	296	163	410	996	530	1,233	644	550	620	789	293	1,113
Detroit	254	0	8	718	779	191	1,462	254	452	989	213	844
Minneapolis/St. Paul	1,000	0	0	317	0	182	516	0	0	692	0	0
St. Louis	322	415	84	597	1,060	639	1,083	432	943	726	897	572
Dallas	0	0	412	0	0	742	0	16	1,035	0	0	757
Houston	368	0	0	316	0	0	1,108	0	0	706	0	0
Los Angeles	134	85	192	2,110	0	0	1,177	494	374	1,562	0	235
San Francisco	118	198	110	0	0	1,555	471	205	616	455	60	395
Denver	0	362	138	0	37	0	602	0	1,450	0	0	0
Average	412	163	204	681	515	705	1,069	531	611	656	247	667
Median	367	0	112	807	389	438	886	100	414	696	278	190

TABLE 14 (Continued)

Area	Off-Premise Units											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery/ Retail Store†††		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0	582	0	0	0	0	1,685	0	89	0	0	20
New York	419	675	1,555	2,317	2,026	577	434	564	577	389	698	761
Philadelphia	758	1,072	395	1,486	1,439	1,484	1,154	1,544	291	270	458	911
Pittsburgh	0	895	0	0	292	0	0	0	0	700	95	0
Washington, D.C.	525	317	216	0	0	1,849	0	0	831	0	0	1,418
Atlanta	837	474	832	1,583	2,561	994	578	1,764	682	938	694	456
Chicago	1,276	0	833	0	0	0	0	0	0	826	141	249
Cleveland	232	0	384	1,920	0	0	0	0	751	244	0	0
Detroit	130	286	0	0	0	223	75	403	0	876	0	0
Minneapolis/St. Paul	500	0	0	0	0	0	500	0	0	1,000	0	0
St. Louis	478	0	95	424	0	428	697	0	400	0	0	145
Dallas	345	518	739	0	538	786	0	345	1,053	155	48	0
Houston	0	0	0	2,409	0	0	463	73	0	0	0	0
Los Angeles	731	1,943	387	877	158	151	467	0	957	0	0	0
San Francisco	0	783	1,766	1,257	273	323	284	564	696	0	0	0
Denver	786	79	829	0	0	0	0	0	0	126	171	0
Average	913	540	691	1,653	1,440	977	649	743	667	551	196	352
Median	600	263	280	1,274	321	384	567	0	347	516	171	329

TABLE 14 (Continued)

Area	Off-Premise Units											
	Office/Corporate Complex§§§			Hospital°°°			Other###			Total++++		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0	7	79	0	0	67	0	59	0	974	284	62
New York	450	427	95	648	803	821	0	0	0	1,075	642	765
Philadelphia	508	488	639	342	660	69	508	328	438	842	700	665
Pittsburgh	373	110	0	0	159	0	0	0	0	1,279	427	0
Washington, D.C.	567	0	242	504	0	282	0	1,812	245	679	225	661
Atlanta	726	586	480	916	942	300	539	0	156	993	1,058	668
Chicago	1,056	170	211	1,098	0	969	268	305	565	736	413	532
Cleveland	281	476	73	807	569	415	530	0	0	769	498	684
Detroit	75	144	0	75	187	44	0	0	0	709	395	396
Minneapolis/St. Paul	72	0	0	0	0	0	0	0	287	435	0	282
St. Louis	368	0	658	0	0	191	0	0	193	934	541	502
Dallas	0	0	1,074	0	209	786	108	73	0	701	510	879
Houston	438	0	0	0	0	0	626	0	0	940	191	0
Los Angeles	0	0	0	130	0	251	179	0	688	1,058	657	380
San Francisco	0	30	0	0	0	252	433	0	964	1,732	200	623
Denver	0	299	0	0	0	0	892	0	0	589	78	920
Average	454	183	249	561	294	353	413	227	303	1,289	518	589
Median	406	99	166	571	209	191	349	0	240	852	344	393

TABLE 15
NUMBER OF WEEKLY INTERCHANGE TRANSACTIONS PER ATM UNIT LOCATION BY AREA

Area	Main Office											
	Lobby+			Vestibule±			Through-the-Wall§			Drive-up°		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0	2	20	306	250	0	0	0	0	0	0	0
New York	0	0	2	2	0	6	0	0	5	0	0	0
Philadelphia	532	426	113	35	3	0	1,250	730	562	0	0	0
Pittsburgh	0	23	0	0	0	0	0	214	0	0	0	0
Washington, D.C.	0	1	12	0	0	0	0	8	0	0	0	102
Atlanta	0	0	23	0	31	53	18	1	13	0	8	0
Chicago	46	63	78	128	0	287	168	71	186	0	0	0
Cleveland	45	4	38	93	32	31	0	0	106	0	0	0
Detroit	0	27	0	0	0	0	50	270	0	0	0	0
Minneapolis/St. Paul	133	0	573	0	0	817	91	0	817	0	0	0
St. Louis	20	16	177	16	28	335	53	20	35	0	0	0
Dallas	33	110	279	139	287	470	114	297	340	45	426	494
Houston	82	58	0	12	0	0	35	0	0	136	0	0
Los Angeles	194	0	6	0	0	0	0	0	22	243	0	0
San Francisco	0	0	2	0	0	0	71	25	7	0	0	0
Denver	83	40	152	493	45	442	382	53	0	0	1,151	1,414
Average	60	51	88	153	147	208	127	95	61	85	295	250
Median	41	0	0	63	0	0	75	0	0	90	0	0

+Q153/Q57; ±Q154/Q58; §Q155/Q59; °Q156/Q60; #Q157/Q61; ++Q158/Q62; ±±Q159/Q63; §§Q160/Q64; °°Q161/Q65; ##Q162/Q66; +++Q163/Q67;

±±±Q164/Q68; §§§Q165/Q69; °°°Q166/Q70; ###Q167/Q71; ++++Q168/Q72

Note: The preceding footnotes also pertain to the continuation of Table 15 on the following pages.

TABLE 15 (Continued)

Area	Branch Office											
	Lobby#			Vestibule++			Through-the-Wall±±			Drive-up§§		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	5	1	14	98	10	13	116	28	6	158	36	0
New York	0	0	2	0	0	9	0	0	12	0	1	12
Philadelphia	202	1	40	25	9	31	195	173	243	26	202	585
Pittsburgh	0	9	0	0	0	0	0	108	0	0	30	0
Washington, D.C.	0	136	0	0	50	52	0	11	19	0	0	14
Atlanta	0	2	6	0	0	3	10	7	71	6	7	43
Chicago	101	88	123	272	0	559	203	74	497	0	0	27
Cleveland	0	0	47	294	62	201	0	0	92	0	0	29
Detroit	21	0	0	189	66	13	546	94	13	148	37	59
Minneapolis/St. Paul	0	0	0	219	0	383	54	0	0	152	0	0
St. Louis	3	10	127	8	111	112	40	107	61	34	26	16
Dallas	0	0	214	0	0	346	0	81	467	0	0	435
Houston	0	0	0	49	0	0	42	0	0	50	0	0
Los Angeles	27	0	0	0	0	0	534	0	4	0	0	0
San Francisco	0	0	0	0	0	0	33	5	1	7	5	2
Denver	0	112	53	0	4	0	608	0	950	0	0	0
Average	26	20	31	31	22	36	255	26	85	42	27	79
Median	5	0	0	49	0	0	44	0	0	6	0	0

TABLE 15 (Continued)

Area	Off-Premise: Free-Standing°° 1982	1983	1984	University/ College## 1982	1983	1984	Shopping Center††† 1982	1983	1984	Grocery/ Retail Store‡‡‡ 1982	1983	1984
Boston	0	37	0	0	0	0	0	0	0	0	0	0
New York	0	0	1	0	0	31	0	0	0	0	0	59
Philadelphia	0	39	456	0	0	0	714	0	475	0	0	199
Pittsburgh	0	0	0	0	89	0	0	0	0	0	6	0
Washington, D.C.	0	27	8	0	0	38	0	0	56	0	0	49
Atlanta	23	24	124	58	43	142	1	0	168	0	0	198
Chicago	581	0	0	0	0	0	0	0	0	229	605	1,149
Cleveland	0	0	89	0	0	0	0	0	114	0	0	0
Detroit	164	469	0	0	0	0	0	483	0	469	0	0
Minneapolis/St. Paul	0	0	0	0	0	0	0	0	0	0	0	0
St. Louis	145	0	123	192	91	115	497	0	380	0	0	101
Dallas	988	747	498	0	1,904	470	0	688	557	399	627	0
Houston	0	0	0	119	0	0	39	30	0	0	0	0
Los Angeles	522	0	0	417	0	0	0	0	11	0	0	0
San Francisco	0	0	3	5	13	0	64	20	1	0	0	0
Denver	651	55	543	0	0	0	0	0	0	860	125	0
Average	230	105	233	83	59	83	53	82	163	415	223	231
Median	338	0	0	111	0	0	1	0	0	292	0	23

TABLE 15 (Continued)

Area	Off-Premise Units											
	Office/Corporate Complex§§§			Hospital°°°			Other###			Total++++		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0	10	0	0	4	18	0	7	0	18	16	9
New York	0	0	0	0	0	32	0	0	0	0	0	8
Philadelphia	14	169	71	0	0	53	0	0	0	188	123	197
Pittsburgh	0	4	0	0	63	0	0	0	0	0	70	0
Washington, D.C.	0	0	25	0	0	11	0	32	48	0	21	24
Atlanta	0	2	54	0	0	4	0	0	109	13	9	80
Chicago	80	163	181	485	0	646	301	0	0	165	104	322
Cleveland	0	0	236	399	130	210	0	0	0	128	10	91
Detroit	0	149	0	0	76	0	0	0	0	153	58	14
Minneapolis/St. Paul	0	0	0	0	0	0	0	0	604	62	0	594
St. Louis	304	0	0	0	0	393	0	0	39	72	87	114
Dallas	0	0	514	0	156	470	771	714	0	382	447	442
Houston	0	0	0	0	0	0	41	0	0	70	36	0
Los Angeles	0	0	0	0	0	2	0	0	2	505	0	4
San Francisco	0	0	0	0	0	0	868	0	0	1,089	5	1
Denver	0	133	0	0	0	0	306	0	0	269	44	608
Average	43	38	69	228	45	107	184	17	41	147	40	84
Median	0	0	0	392	0	0	301	0	0	108	0	0

TABLE 16

ATM UNITS BY AREA

Area	Main Office: Lobby+ 1982	Lobby+ 1983	Lobby+ 1984	Vestibule± 1982	Vestibule± 1983	Vestibule± 1984	the Wall§ 1982	the Wall§ 1983	the Wall§ 1984	Drive-up° 1982	Drive-up° 1983	Drive-up° 1984
Boston	1.5%	3.1%	2.1%	1.4%	0.7%	0.5%	15.7%	1.4%	0.2%	0.0%	0.0%	0.2%
New York	4.0	3.0	0.6	1.7	1.6	1.8	3.3	1.1	0.2	0.0	0.0	0.0
Philadelphia	1.4	1.7	2.4	1.7	1.4	0.0	1.1	1.1	0.8	0.0	0.0	0.0
Pittsburgh	4.4	2.1	2.0	0.0	0.0	0.0	2.2	1.4	0.0	0.0	0.0	0.0
Washington, D.C.	1.2	0.2	0.9	0.2	0.7	0.2	1.8	0.7	0.3	0.2	0.0	0.2
Atlanta	1.3	0.9	0.6	1.2	0.4	0.2	5.1	4.7	6.0	0.1	0.4	0.0
Chicago	27.8	28.1	27.1	5.8	4.5	2.6	9.0	3.4	4.5	0.0	1.1	1.3
Cleveland	3.4	2.6	2.0	3.2	1.2	0.8	0.5	0.9	0.5	0.0	0.0	0.0
Detroit	2.7	1.5	1.8	0.7	0.8	0.4	0.7	0.4	1.1	1.0	0.4	0.4
Minneapolis/St. Paul	11.7	16.7	25.0	5.0	0.0	0.0	16.3	50.0	25.0	0.5	0.0	0.0
St. Louis	13.2	3.7	8.8	4.7	0.7	2.8	4.7	6.6	2.3	0.0	0.0	0.0
Dallas	12.0	4.8	1.3	10.2	18.5	3.8	15.0	11.3	3.1	2.7	5.4	1.3
Houston	34.3	44.4	66.7	6.3	0.0	0.0	1.3	0.0	0.0	4.2	11.1	16.7
Los Angeles	1.0	1.3	0.6	0.2	0.2	0.3	1.7	0.9	0.6	0.2	0.2	0.0
San Francisco	1.1	0.7	1.3	0.0	0.1	0.2	1.3	0.6	0.9	0.0	0.0	0.2
Denver	16.3	6.1	7.1	10.7	4.9	4.4	9.2	4.9	0.0	0.0	1.2	0.9
Average	2.0%	2.2%	2.5%	0.8%	1.3%	0.8%	1.9%	2.1%	2.1%	0.1%	0.3%	0.2%
Median	1.5%	1.5%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

$^{+}\frac{Q57}{Q72} \times 100$; $\frac{^{\pm}Q58}{Q72} \times 100$; $\frac{^{\S}Q59}{Q72} \times 100$; $\frac{^{\circ}Q60}{Q72} \times 100$; $\frac{^{\#}Q61}{Q72} \times 100$;

$\frac{^{++}Q62}{Q72} \times 100$; $\frac{^{\pm\pm}Q63}{Q72} \times 100$; $\frac{^{\S\S}Q64}{Q72} \times 100$; $\frac{^{\circ\circ}Q65}{Q72} \times 100$; $\frac{^{\#\#}Q66}{Q72} \times 100$;

$\frac{^{+++}Q67}{Q72} \times 100$; $\frac{^{\pm\pm\pm}Q68}{Q72} \times 100$; $\frac{^{\S\S\S}Q69}{Q72} \times 100$; $\frac{^{\circ\circ\circ}Q70}{Q72} \times 100$; $\frac{^{\#\#\#}Q71}{Q72} \times 100$.

Note: The preceding footnotes pertain to the continuation of Table 16 on the following pages.

TABLE 16 (Continued)

Area	Branch Office Lobby# 1982	1983	1984	Vestibule++ 1982	1983	1984	Through-the-Wall±± 1982	1983	1984	Drive-up§§ 1982	1983	1984
Boston	3.9%	11.0%	6.7%	32.7%	44.3%	49.9%	27.5%	30.6%	23.6%	1.0%	2.5%	2.5%
New York	10.9	1.6	27.7	53.1	70.5	50.0	17.8	7.9	9.2	1.0	0.7	3.1
Philadelphia	1.0	12.7	17.5	12.6	12.1	11.8	63.1	54.9	56.5	3.8	3.1	4.6
Pittsburgh	3.3	6.2	20.9	0.0	0.0	0.0	77.5	56.5	36.0	0.0	2.0	0.0
Washington, D.C.	5.9	6.9	5.0	12.7	4.0	13.4	67.2	71.4	60.2	4.1	5.0	5.5
Atlanta	0.7	2.6	1.5	3.7	0.6	2.8	65.2	67.6	66.3	4.2	3.1	2.0
Chicago	8.0	18.0	14.2	8.9	2.2	1.3	21.8	15.7	16.1	1.8	6.7	5.2
Cleveland	6.1	5.9	15.1	27.2	11.2	8.0	47.1	69.4	49.2	5.1	3.8	14.6
Detroit	11.1	23.3	21.4	25.0	40.1	30.8	37.7	10.3	20.7	3.9	13.2	11.6
Minneapolis/St. Paul	2.3	0.0	0.0	17.0	33.3	25.0	7.3	0.0	0.0	2.9	0.0	0.0
St. Louis	0.8	6.6	15.3	7.7	14.0	12.5	55.1	61.8	34.3	6.0	4.4	4.0
Dallas	0.0	0.6	5.6	0.0	0.0	12.5	14.8	10.7	41.9	0.0	0.0	7.5
Houston	0.9	0.0	0.0	1.3	0.0	0.0	35.1	0.0	0.0	4.2	11.1	16.7
Los Angeles	4.3	3.0	5.0	0.7	2.1	1.4	86.0	84.2	77.7	0.8	0.9	4.4
San Francisco	1.2	2.0	9.3	0.3	0.5	0.2	87.4	89.4	80.7	3.9	2.0	2.8
Denver	4.6	2.4	2.7	10.8	18.3	4.4	23.2	18.3	41.6	0.0	0.0	0.9
Average	13.7%	5.7%	10.6%	14.7%	12.5%	14.8%	53.2%	59.3%	48.9%	2.1%	3.1%	4.8%
Median	0.0%	0.5%	2.9%	0.0%	0.0%	0.0%	57.0%	57.7%	44.8%	0.0%	0.0%	1.7%

TABLE 16 (Continued)

Area	Off-Premise											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery/ Retail Store†††		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0.5%	1.0%	0.0%	0.0%	0.0%	0.7%	0.4%	0.0%	2.1%	0.0%	0.3%	2.3%
New York	1.1	3.0	0.8	3.5	3.8	2.4	0.1	2.2	1.0	1.0	0.5	0.5
Philadelphia	4.0	4.2	1.3	0.8	0.6	0.3	4.7	3.9	1.1	2.1	0.8	1.1
Pittsburgh	2.0	1.0	2.8	2.1	1.7	2.4	0.0	0.0	0.0	4.5	19.5	22.5
Washington, D.C.	0.5	3.3	3.1	0.3	1.0	1.1	1.0	0.7	3.0	0.2	1.0	1.1
Atlanta	12.6	9.9	6.5	1.9	2.2	2.5	2.5	2.6	3.0	0.5	3.3	6.1
Chicago	2.6	0.0	3.2	0.4	1.1	0.6	0.0	0.0	0.0	6.5	6.7	11.6
Cleveland	0.9	0.9	1.8	0.7	0.0	0.3	0.5	1.2	1.5	0.3	0.0	0.3
Detroit	3.1	1.5	0.0	0.1	0.0	0.7	0.6	0.8	1.4	0.8	2.3	1.8
Minneapolis/St. Paul	8.0	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.0	7.0	0.0	0.0
St. Louis	1.0	0.0	0.8	2.3	1.5	1.7	3.5	0.7	2.3	0.0	0.0	13.3
Dallas	21.0	10.7	10.0	0.0	0.6	0.6	2.6	6.0	8.1	20.9	29.8	0.0
Houston	0.0	0.0	0.0	1.7	0.0	0.0	3.0	33.4	0.0	0.0	0.0	0.0
Los Angeles	2.1	1.5	2.5	1.1	1.1	1.1	0.6	3.2	2.5	0.0	0.0	0.0
San Francisco	0.4	0.2	0.4	1.1	0.3	0.9	1.2	0.5	1.9	0.1	0.0	0.2
Denver	14.9	24.4	31.0	0.0	2.4	0.0	0.0	12.2	0.0	2.8	3.7	6.2
Average	3.5%	3.6%	3.4%	1.3%	1.1%	1.4%	1.8%	1.9%	2.1%	2.1%	3.1%	4.1%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 16 (Continued)

Area	Off-Premise Units								
	Office/Corporate Complex§§§			Hospital°°°			Other###		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	0.0%	3.4%	7.6%	1.1%	1.4%	1.4%	14.3%	0.3%	0.2%
New York	1.0	1.6	1.6	1.6	1.4	1.0	0.1	1.1	0.2
Philadelphia	1.1	2.0	1.6	0.1	0.4	0.8	2.5	1.1	0.3
Pittsburgh	2.3	3.8	0.0	1.8	2.7	0.0	0.0	3.1	0.0
Washington, D.C.	1.2	1.8	2.5	0.8	2.1	2.0	2.6	1.2	0.6
Atlanta	0.8	1.2	1.7	0.0	0.1	0.3	0.2	0.4	0.6
Chicago	3.0	6.9	5.8	2.7	0.0	1.9	1.7	5.6	4.5
Cleveland	0.8	0.9	2.3	3.7	2.0	3.8	0.5	0.0	0.0
Detroit	12.3	3.1	2.5	0.3	0.8	2.2	0.0	1.5	3.3
Minneapolis/St. Paul	5.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	25.0
St. Louis	1.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	1.4
Dallas	0.0	0.4	3.1	0.0	0.6	1.3	0.9	0.6	0.0
Houston	4.6	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
Los Angeles	0.5	0.6	0.8	0.2	0.2	1.7	0.8	0.6	1.7
San Francisco	1.4	2.3	0.0	0.0	0.0	0.2	0.7	1.4	0.4
Denver	0.0	1.2	0.0	0.0	0.0	0.0	7.4	0.0	0.9
Average	1.3%	2.0%	2.1%	0.7%	0.8%	1.2%	0.8%	1.0%	0.8%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 17a
ATM UNIT INSTALLATION PLANS BY AREA
PERCENTAGE OF TOTAL ATM UNITS TO BE INSTALLED

Area	Main Office											
	Lobby+			Vestibule±			Through-the-Wall§			Drive-up°		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	1.9%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	3.7%	0.0%	2.8%	0.0%	0.0%
New York	0.0	2.2	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philadelphia	2.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.5	4.2	4.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	4.0	0.0	1.2	0.0	0.0	0.0	3.1	1.7	1.2	0.0	0.0	0.0
Chicago	9.3	0.0	0.0	0.0	0.0	0.0	3.6	11.1	0.0	0.0	3.7	6.3
Cleveland	0.5	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detroit	14.3	0.0	0.0	0.1	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	0.0
St. Louis	20.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	8.3	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	15.3	0.0	0.0
Houston	22.9	26.6	0.0	9.8	0.0	0.0	0.0	6.7	0.0	20.0	0.0	0.0
Los Angeles	1.6	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.4
San Francisco	2.1	1.5	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0
Denver	45.8	0.0	3.8	0.0	0.0	0.0	16.7	0.0	3.8	12.5	0.0	19.2
Average	1.7%	0.8%	0.9%	0.4%	0.1%	0.0%	0.8%	1.3%	0.3%	0.4%	0.1%	0.8%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

$\frac{+Q89}{Q104} \times 100$; $\frac{\pm Q90}{Q104} \times 100$; $\frac{\S Q91}{Q104} \times 100$; $\frac{^{\circ}Q92}{Q104} \times 100$; $\frac{\#Q93}{Q104} \times 100$; $\frac{++Q94}{Q104} \times 100$; $\frac{\pm\pm Q95}{Q104} \times 100$;

$\frac{\S\S Q96}{Q104} \times 100$; $\frac{^{\circ\circ}Q97}{Q104} \times 100$; $\frac{\#\#Q98}{Q104} \times 100$; $\frac{+++Q99}{Q104} \times 100$; $\frac{\pm\pm\pm Q100}{Q104} \times 100$; $\frac{\S\S\S Q101}{Q104} \times 100$;

$\frac{^{\circ\circ\circ}Q102}{Q104} \times 100$; $\frac{\#\#\#Q103}{Q104} \times 100$.

Note: The preceding footnotes also pertain to the continuation of Table 17a on the following pages.

TABLE 17a (Continued)

Area	Branch Office Lobby# 1982	1983	1984	Vestibule++ 1982	1983	1984	Through-the-Wall±± 1982	1983	1984	Drive-up§§ 1982	1983	1984
Boston	23.7%	8.2%	6.0%	43.1%	45.5%	37.3%	2.6%	5.2%	24.1%	3.1%	0.0%	0.0%
New York	6.6	19.6	21.3	46.8	30.4	40.4	15.8	14.1	1.1	0.0	8.7	19.1
Philadelphia	14.3	38.5	13.7	3.1	2.1	12.3	48.5	29.2	26.0	4.1	6.3	30.1
Pittsburgh	11.1	39.5	73.5	0.0	28.0	0.0	55.6	23.3	7.4	16.7	2.3	5.9
Washington, D.C.	9.9	0.0	4.8	9.9	0.0	9.7	48.1	47.2	37.1	13.2	12.5	21.0
Atlanta	9.6	17.7	5.8	0.0	0.0	0.0	40.3	30.2	43.9	7.6	2.7	3.5
Chicago	0.0	7.4	0.0	0.0	0.0	6.3	18.6	18.5	12.5	6.7	3.7	0.0
Cleveland	9.6	54.0	32.9	3.1	5.3	2.9	57.9	16.9	5.7	4.3	8.8	37.1
Detroit	20.6	2.5	0.0	7.5	10.0	0.0	37.3	12.5	16.7	12.7	35.0	25.0
Minneapolis/St. Paul	0.0	0.0	0.0	5.3	0.0	100.0	5.3	0.0	0.0	7.8	0.0	0.0
St. Louis	8.3	68.4	0.0	0.0	1.8	11.5	27.5	8.7	38.5	11.7	12.2	3.8
Dallas	0.0	32.3	0.0	0.0	0.0	10.7	0.0	6.4	21.4	0.0	0.0	14.3
Houston	12.9	0.0	0.0	2.9	0.0	0.0	8.6	0.0	0.0	10.9	0.0	0.0
Los Angeles	28.4	8.0	0.0	6.5	4.0	0.0	32.2	45.4	60.9	1.7	13.3	15.9
San Francisco	26.6	64.7	5.7	0.0	0.0	0.0	53.3	13.7	47.1	3.4	5.0	4.3
Denver	0.0	0.0	15.4	0.0	19.0	7.7	0.0	0.0	0.0	0.0	0.0	3.8
Average	21.5%	25.5%	14.8%	16.7%	9.4%	10.9%	20.9%	24.2%	28.0%	5.1%	7.5%	12.8%
Median	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	7.1%	13.0%	16.7%	0.0%	0.0%	0.0%

Table 17a (Continued)

Area	Off-Premise											
	Free-Standing°°			University/ College##			Shopping Center+++			Grocery Store+++		
	1982	1983	1984	1982	1983	1984	1982	1983	1984	1982	1983	1984
Boston	10.3%	0.0%	0.0%	0.8%	0.0%	4.8%	0.7%	0.0%	7.2%	0.3%	29.9%	12.0%
New York	15.7	2.2	1.1	2.1	0.0	0.0	2.6	2.2	0.0	4.2	12.0	0.0
Philadelphia	11.3	12.5	5.5	0.0	0.0	2.7	5.4	1.0	0.0	1.9	7.3	1.4
Pittsburgh	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	2.9
Washington, D.C.	9.7	23.6	3.2	0.0	1.4	1.6	0.0	2.8	1.6	0.5	1.4	0.0
Atlanta	18.0	11.2	10.5	1.5	2.6	2.3	11.4	4.7	1.8	0.0	17.2	21.6
Chicago	5.6	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.3	33.3	50.0
Cleveland	3.2	3.5	11.4	0.2	1.8	2.9	0.0	0.9	1.4	13.8	1.8	0.0
Detroit	0.0	0.0	8.3	0.0	2.5	8.3	0.0	2.5	25.0	4.2	7.5	8.3
Minneapolis/St. Paul	38.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.9	0.0	0.0
St. Louis	0.0	1.8	11.5	0.0	0.0	0.0	0.0	0.0	3.8	1.7	0.0	7.7
Dallas	55.6	3.2	7.1	0.0	0.0	0.0	0.0	0.0	3.6	12.5	38.6	35.7
Houston	0.0	0.0	0.0	0.0	0.0	0.0	12.0	60.0	0.0	0.0	0.0	0.0
Los Angeles	16.3	0.4	0.0	1.8	2.0	4.3	5.9	8.4	0.0	0.0	2.4	7.2
San Francisco	4.6	2.2	1.4	0.6	1.4	0.0	3.1	7.2	18.6	2.9	0.0	17.1
Denver	12.5	71.5	46.2	0.0	9.5	0.0	0.0	0.0	0.0	12.5	0.0	0.0
Average	9.4%	6.1%	6.6%	0.9%	1.4%	2.0%	3.7%	4.3%	3.6%	11.0%	9.6%	10.2%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 17a (Continued)

Area	Off-Premise Office§§§ 1982	1983	1984	Hospital°°° 1982	1983	1984	Other### 1982	1983	1984
Boston	1.0%	7.5%	7.2%	6.9%	0.0%	1.2%	0.0%	0.0%	0.0%
New York	2.2	4.3	4.5	0.7	0.0	2.2	2.1	4.3	10.1
Philadelphia	8.6	1.0	2.7	0.8	2.1	4.1	0.0	0.0	0.0
Pittsburgh	11.1	0.0	0.0	5.6	2.3	0.0	0.0	2.3	0.0
Washington, D.C.	1.1	4.2	3.2	1.1	1.4	1.6	5.9	1.3	11.3
Atlanta	1.7	6.0	5.3	2.8	1.7	1.8	0.0	4.3	1.2
Chicago	20.4	7.4	12.5	3.3	0.0	0.0	4.2	11.2	12.5
Cleveland	0.0	3.5	1.4	6.4	3.5	2.9	1.0	0.0	0.0
Detroit	0.9	12.5	8.3	0.0	10.0	0.0	2.4	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0
St. Louis	5.8	1.8	15.4	0.0	1.8	3.8	0.0	3.5	3.8
Dallas	0.0	6.5	3.6	0.0	6.5	3.6	0.0	6.5	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0
Los Angeles	0.6	0.4	4.3	0.7	0.8	1.4	4.1	14.9	4.3
San Francisco	3.4	2.2	5.7	0.0	0.0	0.0	0.0	0.7	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.5%	3.7%	4.5%	1.1%	1.5%	1.7%	4.9%	4.5%	2.8%
Median	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TABLE 17b

CASH DISPENSER UNIT INSTALLATION PLANS BY AREA

PERCENTAGE OF TOTAL UNITS TO BE INSTALLED

Area	Lobby#	Vestibule++	Branch Office Through-the-Wall±±	Drive up§§
Boston	0.0%	4.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0
Philadelphia	0.0	0.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0
Atlanta	0.0	4.8	0.0	0.0
Chicago	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0
Los Angeles	6.2	0.0	3.1	0.0
San Francisco	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0
Average	1.6%	1.6%	0.8%	0.0%

$\#\frac{Q109}{Q120} \times 100$; $^{++}\frac{Q110}{Q120} \times 100$; $^{\pm\pm}\frac{Q111}{Q120} \times 100$; $^{\S\S}\frac{Q112}{Q120} \times 100$; $^{\circ\circ}\frac{Q113}{Q120} \times 100$;

$\#\#\frac{Q114}{Q120} \times 100$; $^{+++}\frac{Q115}{Q120} \times 100$; $^{\pm\pm\pm}\frac{Q116}{Q120} \times 100$; $^{\S\S\S}\frac{Q117}{Q120} \times 100$; $^{\circ\circ\circ}\frac{Q118}{Q120} \times 100$;

$\#\#\#\frac{Q119}{Q120} \times 100$

Note: The preceding footnotes also pertain to the continuation of Table 17b on the following page.

TABLE 17b (Continued)

Area	Free-Standing°°	College##	Shopping Center+++	Off-Premises Grocery†††	Office§§§	Hospital°°°	Other###
Boston	0.0%	0.0%	0.0%	80.0%	20.0%	0.0%	0.0%
New York	0.0	0.0	0.0	0.0	96.0	0.0	0.0
Philadelphia	10.0	10.0	10.0	50.0	20.0	0.0	0.0
Pittsburgh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Washington, D.C.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Atlanta	0.0	0.0	14.3	14.3	42.8	9.5	14.3
Chicago	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cleveland	0.0	0.0	0.0	0.0	100.0	0.0	0.0
Detroit	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St. Louis	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dallas	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Houston	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Los Angeles	3.1	0.0	6.3	43.7	31.3	3.1	3.1
San Francisco	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denver	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average	1.6%	0.8%	5.0%	38.3%	44.2%	2.5%	3.3%

TABLE 18
PERCENTAGE OF ON-LINE ATM UNITS BY AREA

Area	1982	1983	1984
Boston	75.0%	100.0%	100.0%
New York	100.0	100.0	90.0
Philadelphia	91.7	83.3	100.0
Pittsburgh	100.0	100.0	100.0
Washington, D.C.	100.0	100.0	100.0
Atlanta	95.2	100.0	100.0
Chicago	77.8	71.4	57.1
Cleveland	90.9	100.0	100.0
Detroit	100.0	100.0	100.0
Minneapolis/St. Paul	100.0	100.0	100.0
St. Louis	100.0	100.0	100.0
Dallas	100.0	100.0	100.0
Houston	100.0	50.0	100.0
Los Angeles	100.0	100.0	100.0
San Francisco	88.9	85.7	87.5
Denver	100.0	75.0	100.0
Average	94.2%	93.0%	94.9%

TABLE 19
1984 SERVICE CHARGES BY AREA

Area	No	Yes
Boston	25.0%	75.0%
New York	90.0	10.0
Philadelphia	70.0	30.0
Pittsburgh	100.0	0.0
Washington, D.C.	71.4	28.6
Atlanta	40.0	60.0
Chicago	71.4	28.6
Cleveland	20.0	80.0
Detroit	60.0	40.0
Minneapolis/St. Paul	100.0	0.0
St. Louis	50.0	50.0
Dallas	25.0	75.0
Houston	100.0	0.0
Los Angeles	16.7	83.3
San Francisco	75.0	25.0
Denver	75.0	25.0
Average	57.6%	42.4%

TABLE 20
1984 ATM SERVICE CHARGES — STRUCTURE OF TYPES OF FEES

Area	Per Transaction	Flat Fee	Both	Other
Boston	33.3%	0.0%	0.0%	66.7%
New York	100.0	0.0	0.0	0.0
Philadelphia	66.7	0.0	0.0	33.3
Pittsburgh	0.0	0.0	0.0	0.0
Washington, D.C.	50.0	0.0	0.0	50.0
Atlanta	50.0	10.0	10.0	30.0
Chicago	66.7	0.0	0.0	33.3
Cleveland	75.0	0.0	0.0	25.0
Detroit	0.0	0.0	0.0	100.0
Minneapolis/St. Paul	0.0	0.0	0.0	0.0
St. Louis	80.0	0.0	20.0	0.0
Dallas	66.7	0.0	0.0	33.3
Houston	0.0	0.0	0.0	0.0
Los Angeles	80.0	0.0	0.0	20.0
San Francisco	33.3	0.0	0.0	66.7
Denver	0.0	0.0	100.0	0.0
Average	58.7%	2.2%	6.5%	32.6%

TABLE 21

1984 SERVICE CHARGES COMPARISON
ATM TRANSACTIONS AND DDA PAPER ITEMS

Area	DDA Charge Higher than ATM Charge	DDA Charge Lower than ATM Charge	Same
Boston	0.0%	66.7%	33.3%
New York	0.0	0.0	100.0
Philadelphia	0.0	33.3	66.7
Pittsburgh	0.0	0.0	0.0
Washington, D.C.	0.0	100.0	0.0
Atlanta	10.0	20.0	70.0
Chicago	0.0	0.0	100.0
Cleveland	0.0	50.0	50.0
Detroit	0.0	50.0	50.0
Minneapolis/St. Paul	0.0	0.0	0.0
St. Louis	0.0	40.0	60.0
Dallas	33.3	33.3	33.3
Houston	0.0	0.0	0.0
Los Angeles	20.0	20.0	60.0
San Francisco	33.3	33.3	33.3
Denver	0.0	0.0	100.0
Average	8.7%	32.6%	58.7%

TABLE 22
ACTIVE ATM ACCESS CARDS

Area	1983	1984
Boston	36.0%	58.0%
New York	25.2	40.4
Philadelphia	34.1	42.7
Pittsburgh	0.0	0.0
Washington, D.C.	21.4	42.2
Atlanta	53.2	51.2
Chicago	44.1	45.0
Cleveland	42.2	33.7
Detroit	54.7	41.0
Minneapolis/St. Paul	0.0	0.0
St. Louis	72.0	48.6
Dallas	57.6	48.5
Houston	0.0	0.0
Los Angeles	42.1	41.8
San Francisco	49.9	38.6
Denver	0.0	30.1
Average	43.1%	41.7%

POS FINDINGS

A new section to the 1984 EFT survey provides a glimpse of what is happening in the point-of-sale area. After years of dormancy, interest in point-of-sale has awakened. During 1984, as many as 30 pilot programs were in place, primarily with grocery and gas station merchants. Yet despite this renewed interest, bankers and merchants have many differences concerning the benefits and determining price. In most all programs, price was temporarily laid aside until benefits from the pilots could be analyzed.

The following represents only a sampling of what is taking place in the marketplace. Of those providing a response for the EFT survey, 18 percent completed the section on POS activity. In addition, many other institutions indicated they would have data available in 1985. Of those responding, 90 percent had assets in excess of $1 billion and 75 percent represented the northeastern quarter of the nation. Some POS-related findings include:

- The credit card account and the checking account are clearly the primary accounts accessed.

- The average dollar value for a POS transaction is less than half of the value of a similar ATM transaction ($17 for a proprietary transaction and $19 for an interchange transaction). This is most likely due to the many pilot programs at gas stations where the average card transaction is $18. The average POS credit card transaction is about 50 percent higher then the average credit card ticket of $52, as reported by VISA U.S.A.

- A terminal is averaging ten transactions to a checking and savings account per week and 77 to a credit card account.

- Locations classified as "retail" and "other" in the survey are using terminals without the requirement of PINs.

- Survey data indicate the major portion of transactions at gas stations, convenience stores, and grocery stores access a checking or savings account, while retail and other locations primarily access credit card accounts.

- Only one in three of the respondents are charging their cardholders for a POS transaction. In all cases, the fee is equal to that of an ATM transaction.

- If the bank owns the terminal, 43.8 percent of the merchants are currently paying some form of a fee to the owner. If the merchant owns the terminal, however, he currently is not paying a fee to the bank.

- Again, if the bank owns the terminal, 25 percent of the merchants are receiving some form of a fee. If the merchant owns the terminal, however, only 18.8 percent of the merchants are receiving some form of a fee from the bank. In both cases the fee received is primarily based on a per transaction schedule.

TABLE 23
PERCENTAGE OF PROPRIETARY POS TRANSACTIONS BY TYPE OF ACCOUNT

Checking[+]	Saving[o]	Credit Card[#]	Other[¼]
34.5%	1.1%	64.3%	0

[+]Q216/Q220*100; [o]Q217/Q220*100; [#]Q218/Q220*100; [¼]Q219/220*100

TABLE 24
PERCENTAGE OF INTERCHANGE POS TRANSACTIONS BY TYPE OF ACCOUNT

Checking[+]	Saving[o]	Credit Card[#]	Other[¼]
3.0%	0.2%	96.8%	0

[+]Q225/Q230*100; [o]Q226/Q230*100; [#]Q227/Q230*100; [¼]Q228/230*100

TABLE 25
AVERAGE DOLLAR VALUE OF PROPRIETARY POS TRANSACTIONS

Checking[+]	Saving[o]	Credit Card[#]	Other[¼]
$16.72	$21.17	$72.25	$0

[+]Q221/Q216; [o]Q222/Q217; [#]Q223/Q218; [¼]Q224/219

TABLE 26
AVERAGE DOLLAR VALUE OF INTERCHANGE POS TRANSACTIONS

Checking[+]	Saving[O]	Credit Card[#]	Other[¼]
$19.21	$16.59	$73.49	$0

[+]Q230/Q225; [O]Q231/Q226; [#]Q232/Q227; [¼]Q233/228

TABLE 27
AVERAGE WEEKLY PROPRIETARY TRANSACTIONS PER POS TERMINAL

Checking[+]	Saving[O]	Credit Card[#]	Other[¼]
5.1	0.4%	8.0	0

[+]Q216/A; [O]Q217/A; [#]Q218/A; [¼]Q219/A
A=Q240+Q247+Q254+Q261+Q268+Q275

TABLE 28
AVERAGE WEEKLY INTERCHANGE TRANSACTIONS PER POS TERMINAL

Checking[+]	Saving[O]	Credit Card[#]	Other[¼]
3.3	0.6	68.9	0

[+]Q225/A; [O]Q226/A; [#]Q227/A; [¼]Q228/A
A=Q240+Q247+Q254+Q261+Q268+Q275

TABLE 29
PERCENTAGE OF WEEKLY PROPRIETARY TRANSACTIONS BY TERMINAL LOCATION
With PINs Required

	Gas[1]	Gas/Conven.[2]	Convenience[3]	Supermarket[4]	Retail[5]	Other[6]
Stand-Alone	67.4%	24.9%	0	45.5%	0	0
Scrip	0	0	0	13.8%	0	0
ECR	0	0	0	0	0	0

Without PINs Required

	Gas[1']	Gas/Conven.[2']	Convenience[3']	Supermarket[4']	Retail[5']	Other[6']
Stand-Alone	0	0	0	0	.6%	7.2%
Scrip	0	0	0	0	0	0
ECR	0	0	0	0	12.3%	2.8%

[1] $\frac{Q318+Q332+Q346}{Q318+Q332+Q346+Q360+Q374+Q388} *100$; [2] $\frac{Q319+Q333+Q347}{Q319+Q333+Q347+Q361+Q375+Q389} *100$;

[3] $\frac{Q320+Q334+Q348}{Q320+Q334+Q348+Q362+Q376+Q390} *100$; [4] $\frac{Q321+Q335+Q349}{Q321+Q335+Q349+Q362+Q377+Q391} *100$;

[5] $\frac{Q322+Q336+Q350}{Q322+Q336+Q350+Q363+Q378+Q392} *100$; [6] $\frac{Q323+Q337+Q351}{Q323+Q337+Q351+Q364+Q379+Q393} *100$

[1'] $\frac{Q325+Q339+Q353}{Q325+Q339+Q353+Q367+Q381+Q395} *100$; [2'] $\frac{Q326+Q340+Q354}{Q326+Q340+Q354+Q368+Q382+Q396} *100$

[3'] $\frac{Q327+Q341+Q355}{Q327+Q341+Q355+Q369+Q383+Q397} *100$; [4'] $\frac{Q328+Q342+Q356}{Q328+Q342+Q356+Q370+Q384+Q398} *100$

[5'] $\frac{Q329+Q343+Q357}{Q329+Q343+Q357+Q371+Q385+Q399} *100$; [6'] $\frac{Q330+Q344+Q358}{Q330+Q344+Q358+Q372+Q386+Q400} *100$

TABLE 30

PERCENTAGE OF WEEKLY INTERCHANGE TRANSACTIONS BY TERMINAL LOCATION

With PINs Required

	Gas[1]	Gas/Conven.[2]	Convenience[3]	Supermarket[4]	Retail[5]	Other[6]
Stand-Alone	32.6%	75.1%	0	40.7%	0	0
Scrip	0	0	0	0	0	0
ECR	0	0	0	0	0	0

Without PINs Required

	Gas[1']	Gas/Conven.[2']	Convenience[3']	Supermarket[4']	Retail[5']	Other[6']
Stand-Alone	0	0	0	0	5.1%	64.6%
Scrip	0	0	0	0	0	0
ECR	0	0	0	0	82.0%	25.4%

[1] $\frac{Q360+Q374+Q388}{Q318+Q332+Q346+Q360+Q374+Q388} *100$; [2] $\frac{Q361+Q375+Q389}{Q319+Q333+Q347+Q361+Q375+Q389} *100$;

[3] $\frac{Q362+Q376+Q390}{Q320+Q334+Q348+Q362+Q376+Q390} *100$; [4] $\frac{Q363+Q377+Q391}{Q321+Q335+Q349+Q363+Q377+Q391} *100$;

[5] $\frac{Q364+Q378+Q392}{Q322+Q336+Q350+Q364+Q378+Q392} *100$; [6] $\frac{Q365+Q379+Q393}{Q323+Q337+Q351+Q365+Q379+Q393} *100$

[1'] $\frac{Q367+Q381+Q395}{Q325+Q339+Q353+Q367+Q381+Q395} *100$; [2'] $\frac{Q368+Q382+Q396}{Q326+Q340+Q354+Q368+Q382+Q396} *100$;

[3'] $\frac{Q369+Q383+Q397}{Q327+Q341+Q355+Q369+Q383+Q397} *100$; [4'] $\frac{Q370+Q384+Q398}{Q328+Q342+Q356+Q370+Q384+Q398} *100$;

[5'] $\frac{Q371+Q385+Q399}{Q329+Q343+Q357+Q371+Q385+Q399} *100$; [6'] $\frac{Q372+Q386+Q400}{Q330+Q344+Q358+Q372+Q386+Q400} *100$;

TABLE 31
PERCENTAGE OF POS TERMINAL PER STORE LOCATION

	Gas[1]	Gas/Conven.[2]	Convenience[3]	Supermarket[4]	Retail[5]	Other[6]
Stand-Alone	17.9%	1.0%	2.8%	9.2%	20.9%	48.2%
Scrip	0	9.1%	0	90.9%	0	0
ECR	0	0	0	0	98.5%	1.5

[1] $\frac{Q234+Q241*100}{Q240+Q247}$; [2] $\frac{Q235+Q242*100}{Q241+Q248}$; [3] $\frac{Q236+Q243*100}{Q242+Q249}$;

[4] $\frac{Q237+Q244*100}{Q243+Q250}$; [5] $\frac{Q237+Q245*100}{Q244+Q251}$; [6] $\frac{Q238+Q246*100}{Q245+Q252}$

TABLE 32
PERCENTAGE OF TRANSACTIONS BY STORE TYPE

	Gas	Gas/Conven.	Convenience	Supermarket	Retail	Other
Checking	96.9%	87.3%	0	96.3%	5.6%	0
Saving	3.1%	12.5%	0	0	0	0
Credit Card	0	2.2%	0	3.7%	94.4%	100%
Other	0	0	0	0	0	0

TABLE 33
CARDHOLDER POS SERVICE CHARGES

No	Yes
62.5%	37.5%

TABLE 34
CARDHOLDER POS SERVICE CHARGES--TYPE OF FEES

Per Transaction	Flat Fee	Both	Other
83.3%	0	0	16.7%

TABLE 35
CARDHOLDER POS SERVICE CHARGES--COMPARED TO ATM SERVICE CHARGE

No	Yes
0	100%

TABLE 36
MERCHANT POS SERVICE CHARGE PAID--BY TERMINAL OWNERSHIP

Bank's Terminal		Merchant's Terminal	
No	Yes	No	Yes
56.3%	43.8%	100%	0

TABLE 37
MERCHANT POS SERVICE CHARGE PAID--TYPE OF FEES

Per Transaction	Flat Fee	Both	Other
85.7%	14.3%	0	0

TABLE 38
MERCHANT POS SERVICE CHARGE RECEIVED--BY TERMINAL OWNERSHIP

Bank's Terminal		Merchant's Terminal	
No	Yes	No	Yes
75.0%	25.0%	81.3%	18.8%

TABLE 39
MERCHANT POS SERVICE CHARGE RECEIVED--TYPE OF FEES

Per Transaction	Flat Fee	Both	Other
51.1%	0	42.9%	0

APPENDIX A

1984 SURVEY QUESTIONNAIRE

1984 Survey of Electronic Funds Transfer Transactions

Bank Administration Institute
AN OPERATIONS & TECHNOLOGY GROUP PROJECT

INSTRUCTIONS

- Please report all data for the period beginning Monday, November 12, 1984, and ending Sunday, November 18, 1984.
- The Comments, Section XVI, should be completed at the end of the survey period.
- Since you may be unable to answer all questions, please respond with "N.A." if the question does not apply to your bank, or with a "zero" where appropriate.
- Please read all definitions before completing the survey.
- Mail the completed survey booklet to:

  1984 EFT Survey
  Bank Administration Institute
  60 Gould Center
  Rolling Meadows, Illinois 60008

- If you have any questions, please call Steve Demaree at (312) 228-6200.

BANK ADMINISTRATION INSTITUTE

Survey of Electronic Funds Transfer Transactions

Date _____

Bank Name _____

Street Address _____

City _____ State _____ Zip _____

Name _____ Title _____
(of person to be contacted about survey date)

Phone _____

Name _____ Title _____
(of person to receive completed survey if different from above)

Please report all actual counts. *Do not round off.*

ACH TRANSACTIONS—any electronic funds transfer transactions processed through a local or regional automated clearinghouse, including any items you have processed for your own customers.

RETURNED ACH TRANSACTIONS:

Sent—any ACH transaction that you returned to the originator because you were unable to post to an account or for which no prenotification was on file.

Received—any ACH transaction that you originated, but which was returned to you by the ACH or the intended receiver.

ACH DEBIT TRANSACTIONS:

Insurance Premium, Home Mortgage—any ACH transaction sent or received by you for the payment of a consumer obligation.

Telephone Bill Payment—any ACH transaction sent or received by you as a result of a telephone bill payment program at a financial institution.

Corporate Payment—any ACH transaction sent or received by you that was originated by a corporation for the account of a corporation.

I. ACH TRANSACTIONS

QUESTION	Question Relationship	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SAT.—SUN.		WEEKLY TOTAL	
		Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
1./2. Debits	—													**1.**	**2.**
3./4. Credits	—													**3.**	**4.**
5./6. Total ACH transactions	1+3=5 2+4=6													**5.**	**6.**

II. RETURNED ACH TRANSACTIONS

QUESTION	Question Relationship	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SAT.—SUN.		WEEKLY TOTAL	
		Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
7./8. Debits returned	—													**7.**	**8.**
9./10. Credits returned	—													**9.**	**10.**
11./12. Total returned transactions	7+9=11 8+10=12													**11.**	**12.**

III. ACH DEBIT TRANSACTIONS

QUESTION	Question Relationship	MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SAT.—SUN.		WEEKLY TOTAL	
		Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received	Sent	Received
13./14. Insurance premium	—													**13.**	**14.**
15./16 Home mortgage	—													**15.**	**16.**
17./18. Telephone bill payment	—													**17.**	**18.**
19./20. Corporate payment—replacement for depository transfer	—													**19.**	**20.**
21./22. Other payments	—													**21.**	**22.**
23./24. Total ACH debit transactions	13+15+17+19+21=23 14+16+18+20+22=24													**23.**	**24.**

Are you participating in an interchange environment? (Circle one)

1. No **2.** Yes

If *no*, complete Table IV *only* and skip to Table VI.
If *yes*, complete Tables IV *and* V and continue to Table VI.

Please report all actual counts. Do *not* round off.

ATM TRANSACTIONS—PROPRIETARY—any transactions initiated at *your* bank's automated teller machine by *your* customers.

IV. ATM TRANSACTIONS—PROPRIETARY

QUESTION	Question Relationship	Monday	Tuesday	Wednesday	Thursday	Friday	Sat./Sun.	WEEKLY TOTAL
25. Total number of cash withdrawals from checking.								25.
26. Total number of cash withdrawals from savings.								26.
27. Total number of cash withdrawals from credit card.								27.
28. Total number of balance inquiries.								28.
29. Total number of transfers between checking, savings, and credit card accounts.								29.
30. Total number of checking deposits received.								30.
31. Total number of savings deposits received.								31.
32. Total number of bill payments.								32.
33. Total number of other ATM transactions.								33.
34. Total ATM transactions.	25+26+27+28+29+30+31+32+33=34							34.
35. Total dollar value of items in No. 25.		$	$	$	$	$	$	35. $
36. Total dollar value of items in No. 26.		$	$	$	$	$	$	36. $
37. Total dollar value of items in No. 27.		$	$	$	$	$	$	37. $
38. Total dollar value of items in No. 30.		$	$	$	$	$	$	38. $
39. Total dollar value of items in No. 31.		$	$	$	$	$	$	39. $
40. Total dollar value of items in No. 32.		$	$	$	$	$	$	40. $

Please report all actual counts. Do *not* round off.

ATM TRANSACTIONS—INTERCHANGE—any transactions initiated at *your* bank's automated teller machine by *another* financial institution's customer.

V. ATM TRANSACTIONS—INTERCHANGE

QUESTION	Question Relationship	Monday	Tuesday	Wednesday	Thursday	Friday	Sat./Sun.	WEEKLY TOTAL
41. Total number of cash withdrawals from checking.								41.
42. Total number of cash withdrawals from savings.								42.
43. Total number of cash withdrawals from credit card.								43.
44. Total number of balance inquiries.								44.
45. Total number of transfers between checking, savings, and credit card accounts.								45.
46. Total number of checking deposits received.								46.
47. Total number of savings deposits received.								47.
48. Total number of bill payments.								48.
49. Total number of other ATM transactions.								49.
50. Total ATM transactions.	41+42+43+44+45+46+47+48+49=50							50.
51. Total dollar value of items in No. 41.		$	$	$	$	$	$	51. $
52. Total dollar value of items in No. 42.		$	$	$	$	$	$	52. $
53. Total dollar value of items in No. 43.		$	$	$	$	$	$	53. $
54. Total dollar value of items in No. 46.		$	$	$	$	$	$	54. $
55. Total dollar value of items in No. 47.		$	$	$	$	$	$	55. $
56. Total dollar value of items in No. 48.		$	$	$	$	$	$	56. $

VI. ATM LOCATIONS

Please complete the following questions:		MAIN OFFICE				BRANCH OFFICES				OFF-PREMISE UNITS							TOTAL
		Lobby	Vestibule	Through the Wall	Drive-up	Lobby	Vestibule	Through the Wall	Drive-up	Free Standing	University/ College	Shopping Center	Grocery/ Retail Store	Office/ Corporate Complex	Hospital	Other	
How many automated teller machines/cash dispensers do you presently have in service?	Automated Teller Machine	57.	58.	59.	60.	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.	71.	72.
	Cash Dispenser	73.	74.	75.	76.	77.	78.	79.	80.	81.	82.	83.	84.	85.	86.	87.	88.
How many automated teller machines/cash dispensers do you plan to install in the next 12 months?	Automated Teller Machine	89.	90.	91.	92.	93.	94.	95.	96.	97.	98.	99.	100.	101.	102.	103.	104.
	Cash Dispenser	105.	106.	107.	108.	109.	110.	111.	112.	113.	114.	115.	116.	117.	118.	119.	120.
What was the total volume of *proprietary* ATM transactions for all machines installed at each location during the test period, excluding balance inquiries?	Automated Teller Machine	121.	122.	123.	124.	125.	126.	127.	128.	129.	130.	131.	132.	133.	134.	135.	136.
	Cash Dispenser	137.	138.	139.	140.	141.	142.	143.	144.	145.	146.	147.	148.	149.	150.	151.	152.
What was the total volume of *interchange* ATM transactions for all machines at each location during the test period, excluding balance inquiries?	Automated Teller Machine	153.	154.	155.	156.	157.	158.	159.	160.	161.	162.	163.	164.	165.	166.	167.	168.
	Cash Dispenser	169.	170.	171.	172.	173.	174.	175.	176.	177.	178.	179.	180.	181.	182.	183.	184.

NOTE:

72=Sum of 57 through 71
88=Sum of 73 through 87
104=Sum of 89 through 103
120=Sum of 105 through 119
136=Sum of 121 through 135
152=Sum of 137 through 151
168=Sum of 153 through 167
184=Sum of 169 through 183

NUMBER OF CARDS OUTSTANDING—total number of cards issued since ATM program introduction with validated access capability.

HOUSEHOLD—a social unit comprised of those living together in the same dwelling.

NUMBER OF HOUSEHOLDS—total number of households that have at least one ATM access card outstanding.

NUMBER OF ACTIVE CARDS—total number of ATM access cards with a usage rate of at least once per month.

VII. ATM ACCESS CARDS

Type of ATM Access Card	Number of Cards Outstanding	Number of Households	Number of Active Cards
Proprietary ATM card	185.	186.	187.
Local/regional network ATM card	188.	189.	190.
National ATM card	191.	192.	193.
VISA debit card	194.	195.	196.
VISA credit card	197.	198.	199.
MasterCard debit card	200.	201.	202.
MasterCard credit card	203.	204.	205.
Other (please specify) _____ _____	206.	207.	208.
TOTALS	209.	210.	211.

NOTE:

209=Sum of 185 through 206
210=Sum of 186 through 207
211=Sum of 187 through 208

VIII. ATM SERVICE CHARGES

212. Does your bank levy a service charge on customers for using the ATM? (Circle one)

1. No 2. Yes

213. How is your service charge on ATM transactions structured? (Circle one)

1. Per transaction charge
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify)_____

214. Is your service charge for ATM transactions _____ the service charge for DDA paper items? (Circle one)

1. Higher than
2. Lower than
3. The same as

IX. ON-LINE/OFF-LINE

215. Are your ATMs/cash dispensers currently (Circle one)

1. On-line?
2. Off-line?

Are you participating in an interchange environment? (Circle one)

1. No **2.** Yes

If *no*, complete Table X *only* and skip to Table XII.
If *yes*, complete Table X and XI and continue to Table XII.

Please report all actual counts. Do *not* round off.

POS TRANSACTIONS—PROPRIETARY—any transaction initiated by *your* customers at *your* bank's merchant, where the transaction is electronically authorized and captured for processing. The electronic device does *not* dispense cash to the customer.

X. POS TRANSACTIONS—PROPRIETARY

QUESTION	Question Relationship	Monday	Tuesday	Wednesday	Thursday	Friday	Sat./Sun.	WEEKLY TOTAL
216. Total number of debits to checking.								216.
217. Total number of debits to savings.								217.
218. Total number of debits to credit card.								218.
219. Total number of debits to other account.								219.
220. Total POS transactions.	216 + 217 + 218 + 219 = 220							220.
221. Total dollar value of items in No. 216.		$	$	$	$	$	$	221. $
222. Total dollar value of items in No. 217.		$	$	$	$	$	$	222. $
223. Total dollar value of items in No. 218.		$	$	$	$	$	$	223. $
224. Total dollar value of items in No. 219.		$	$	$	$	$	$	224. $

Please report all actual counts. Do *not* round off.

POS TRANSACTIONS—INTERCHANGE—any transaction initiated by *another* financial institution's customer at *your* bank's merchant, where the transaction is electronically authorized and captured for processing. The electronic device does *not* dispense cash to the customer.

XI. POS TRANSACTIONS—INTERCHANGE

QUESTION	Question Relationship	Monday	Tuesday	Wednesday	Thursday	Friday	Sat./Sun.	WEEKLY TOTAL
225. Total number of debits to checking.								225.
226. Total number of debits to savings.								226.
227. Total number of debits to credit card.								227.
228. Total number of debits to other account.								228.
229. Total POS transactions.	225 + 226 + 227 + 228 = 229							229.
230. Total dollar value of items in No. 225.		$	$	$	$	$	$	230. $
231. Total dollar value of items in No. 226.		$	$	$	$	$	$	231. $
232. Total dollar value of items in No. 227.		$	$	$	$	$	$	232. $
233. Total dollar value of items in No. 228.		$	$	$	$	$	$	233. $

Are PINs required? If a PIN is required to use the terminal, please list the number in the row marked *yes*. If a PIN is *not* required to use the terminal, please list the number in the row marked *no*.

STAND-ALONE UNIT—an electronic device that will authorize and capture a monetary transaction.

SCRIPT WRITER—an electronic device that will authorize and capture a monetary transaction, activated by the customer and given script to be presented to the merchant.

ELECTRONIC CASH REGISTER—an electronic device that will capture a monetary transaction within the cash register or a device linked to the cash register.

XII. POS TERMINALS—LOCATIONS

		Are PINs Required?	Gas Station Only	Gas/Convenience Store	Convenience Store	Supermarket	Retailer	Other[1]	TOTAL
How many terminals do you presently have in service?	Stand-Alone Unit	Yes	234	235	236	237	238	239	240
		No	241	242	243	244	245	246	247
	Script Writer	Yes	248	249	250	251	252	253	254
		No	255	256	257	258	259	260	261
	Electronic Cash Register	Yes	262	263	264	265	266	267	268
		No	269	270	271	272	273	274	275
How many terminals do you plan to install in the next 12 months?	Stand-Alone Unit	Yes	276	277	278	279	280	281	282
		No	283	284	285	286	287	288	289
	Script Writer	Yes	290	291	292	293	294	295	296
		No	297	298	299	300	301	302	303
	Electronic Cash Register	Yes	304	305	306	307	308	309	310
		No	311	312	313	314	315	316	317
What was the total volume of *proprietary* POS transactions for all terminals installed at each location during the survey period?	Stand-Alone Unit	Yes	318	319	320	321	322	323	324
		No	325	326	327	328	329	330	331
	Script Writer	Yes	332	333	334	335	336	337	338
		No	339	340	341	342	343	344	345
	Electronic Cash Register	Yes	346	347	348	349	350	351	352
		No	353	354	355	356	357	358	359
What was the total volume of *interchange* POS transactions for all terminals installed at each location during the survey period?	Stand-Alone Unit	Yes	360	361	362	363	364	365	366
		No	367	368	369	370	371	372	373
	Script Writer	Yes	374	375	376	377	378	379	380
		No	381	382	383	384	385	386	387
	Electronic Cash Register	Yes	388	389	390	391	392	393	394
		No	395	396	397	398	399	400	401

NOTE:

240 = Sum of 234 through 239
247 = Sum of 241 through 246
254 = Sum of 248 through 253
261 = Sum of 255 through 260
268 = Sum of 262 through 267
275 = Sum of 269 through 274
282 = Sum of 276 through 281
289 = Sum of 283 through 288
296 = Sum of 290 through 295
303 = Sum of 297 through 302
310 = Sum of 304 through 309
317 = Sum of 311 through 316
324 = Sum of 318 through 323
331 = Sum of 325 through 330
338 = Sum of 332 through 337
345 = Sum of 339 through 344
352 = Sum of 346 through 351
359 = Sum of 353 through 358
366 = Sum of 360 through 365
373 = Sum of 367 through 372
380 = Sum of 374 through 379
387 = Sum of 381 through 386
394 = Sum of 388 through 393
401 = Sum of 395 through 400

NUMBER OF CARDS OUTSTANDING—total number of cards issued since POS program introduction with validated access capability.

HOUSEHOLD—a social unit comprised of those living together in the same dwelling.

NUMBER OF HOUSEHOLDS—total number of households that have at least one POS access card outstanding.

NUMBER OF ACTIVE CARDS—total number of POS access cards with a usage rate of at least once per month.

XIII. POS ACCESS CARDS

Type of POS Access Card	Number of Cards Outstanding	Number of Households	Number of Active Cards
Proprietary ATM card	402.	403.	404.
Local/regional nework ATM card	405.	406.	407.
National ATM card	408.	409.	410.
VISA debit card	411.	412.	413.
VISA credit card	414.	415.	416.
MasterCard debit card	417.	418.	419.
MasterCard credit card	420.	421.	422.
Other (please specify) _____ _____	423.	424.	425.
TOTALS	426.	427.	428.

NOTE:
426 = Sum of 402 through 423
427 = Sum of 403 through 424
428 = Sum of 404 through 425

XIV. POS SERVICE CHARGES TO YOUR CARDHOLDER

429. Does your bank levy a service charge on customers for using a POS terminal? (Circle one)

1. No 2. Yes

430. How is your service charge on POS transactions structured? (Circle one)

1. Per transaction charge
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify) _____

431. Is your service charge for POS transactions the same charge for ATM transactions? (Circle one)

1. No 2. Yes

XV. POS SERVICE CHARGES AND YOUR MERCHANT

432. Do you *pay* a service charge to the merchant if your customer uses *your* POS terminal at their location? (Circle one)

1. No 2. Yes

433. Do you *pay* a service charge to the merchant if your customer uses *the merchant's* POS terminal at their location? (Circle one)

1. No 2. Yes

434. How is the service charge paid on these POS transactions structured? (Circle one)

1. Per transaction
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify) _____

435. Do you *receive* a service charge from the merchant if your customer uses *your* POS terminal at their location? (Circle one)

1. No 2. Yes

436. Do you *receive* a service charge from the merchant if your customer uses *the merchant's* POS terminal at their location? (Circle one)

1. No 2. Yes

437. How is the service charge received on these POS transactions structured? (Circle one)

1. Per transaction
2. Flat fee
3. Flat fee and per transaction charge
4. Other (please specify) _____

XVI. COMMENTS

NOTE: The results of the past Electronic Funds Transfer Transactions Survey contained appendices devoted to commentary from the nation's EFT professionals. Please provide your comments so that we can continue this valuable forum. How have conditions changed from last year? Attach a separate sheet if you need more space.

ACH settlement

ACH prenotifications

ACH return items

ATM settlement

ATM vandalism

ATM availability

ATM fraud/losses

ATM security

Regulation E

POS settlement

POS return items

POS fraud/losses

POS security

Additional comments

BANK ADMINISTRATION INSTITUTE

Operations & Technology Group
60 Gould Center
Rolling Meadows, Illinois 60008

APPENDIX B

GEOGRAPHIC SURVEY AREAS

Figure B-1
EFT Geographic Areas

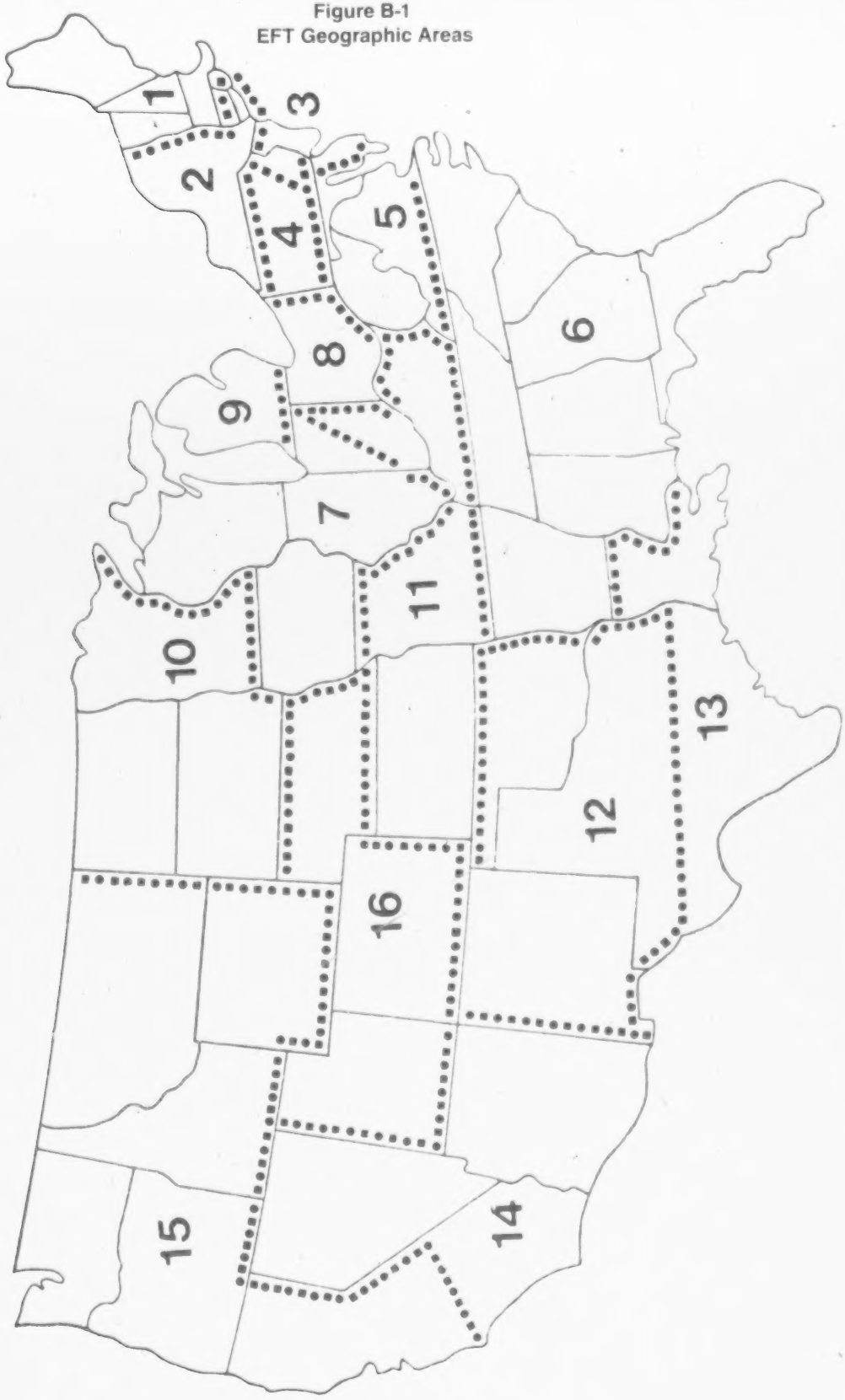


TABLE B-1
SURVEY RESPONDENTS BY GEOGRAPHIC AREA

Area*	ADL Survey Banks 1982	1983	1984	All Reporting Banks+ 1982	1983	1984
Boston	2	0	0	9	5	4
New York	4	2	0	17	13	13
Philadelphia	2	2	0	15	12	11
Pittsburgh	2	3	0	4	5	2
Washington, D.C.	1	1	0	8	6	8
Atlanta	3	2	0	23	13	15
Chicago	5	3	0	11	8	8
Cleveland	3	3	0	12	7	7
Detroit	2	1	0	9	5	5
Minneapolis/St. Paul	1	1	0	4	1	1
St. Louis	2	1	0	10	6	10
Dallas	2	2	0	5	4	4
Houston	1	1	0	7	2	1
Los Angeles	1	0	0	11	8	7
San Francisco	3	1	0	10	8	10
Denver	1	0	0	6	4	4
Total banks	35	23	0	161	107	110

*The Outlook for the Nation's Check Payment System: 1970-1980, Arthur D. Little, Inc., Cambridge, Massachusetts, December 1970.

+The non-Arthur D. Little banks are not necessarily located in the cities surveyed by ADL. For the sake of consistency, however, their data are included in a regional area that has as its center the city studied in this survey. All reporting banks include the data from the ADL banks.

APPENDIX C
PROBLEMS REPORTED BY BANKERS

The following comments were submitted by bankers who participated in the Institute's 1984 EFT survey. The purpose of this section is to inform bankers about overall problems in the ACH, ATM, and POS payment systems. References to specific organizations, vendors, or pieces of equipment are omitted; however, comments concerning working relations with Federal Reserve Banks and other financial institutions that are pertinent to the overall functioning of the EFT system have been included to promote the cooperative efforts for improvement by all participants.

ACH: Settlement

"The Federal Reserve does not give a batch detail of entries on the statement of ACH activity. This causes reconcilement problems."

"Many receiving banks do not post items on the settlement date, primarily due to the late delivery of information. This results from the lack of automation at the receiver's end. Unfortunately, customers do not understand reasons for delay, especially when it concerns their payroll deposit."

ACH: Prenotifications

"The failure to respond to prenotification rejections and the failure to appropriately originate prenotifications remains a serious problem in the ACH payment system."

"Still a major problem in the ACH. Many institutions still do not respond on a timely basis, despite the increased educational programs for receiving institutions."

"RDFI's are getting better at replying to the rejected prenotifications."

"There is some problem of communication between originating companies and consumers regarding account number changes. Many times consumers do not know how to contact the originating company. Also, originating companies tend to be slow in responding to notifications of change.

"We feel the financial community continues to take a positive attitude toward prenotifications, resulting in timely responses and a reduction in the problems that we are experiencing."

"The lag time for notification corrections continues to hover around ten days."

"Within the clearing house network, there are many banks that do not acknowledge prenotes. Therefore, return notifications are sent, and if they are in error, it causes delay in posting or potential returns."

"Third-party processors do not notify the financial institutation of rejected prenotification items."

"Credit prenotes give the receiving institution the chance to validate information, prenotes should continue. This gives the customer a chance for denial."

"Third-party processors do not notify the financial institution of rejected prenotification items."

"Credit prenotes give the receiving institution the chance to validate information; prenotes should continue. This gives the customer a chance for denial."

ACH: Return Items

"ACH will not grow into a cost-efficient mechanism until most originators begin processing returns in an automated fashion."

"Institutions have been responsive to sending returns on time and with complete information. However, most institutions continue to send paper returns."

"RDFI's are getting better at processing returns in a timely manner."

"After operating one (1) year with an automated return process, we have found many advantages, such as decreased cost, timely processing, and settlement. The few errors that did occur were resolved with the aid of our clearing house."

ATM: Settlement

"Off-site locations are settled by a central balancing group and branch locations are settled by branch personnel."

"Becoming increasingly complex as institutions join more than one shared network. Each network has its own procedures for settling and adjusting."

"We are experimenting with settlement and replenishment of ATM cash on a weekly basis. Results have been positive, therefore warranting implementation throughout our entire ATM system."

"The settlement is automated and therefore does not require daily settling. On a weekly basis all machines are settled and reloaded."

ATM: Vandalism

"Slight increase in vandalism in 1984; [it] is occurring in areas with declining households. ATMs will be targeted for relocation."

"Has decreased overall with the apparent customer awareness of surveillance equipment."

"Minimal."

ATM: Availability

"In May, when we joined a network, we noticed a decrease in availability. However, currently we are running 97.5 percent available to the customer."

"Customer availability continues to run at approximately 98 percent during1984."

"Continue to maintain very high percentage due to refined procedures and trained personnel."

"We are experiencing increased ATM availability resulting from the implementation of a dynamic reconfiguration. This primarily pertains to depository malfunctions and low cash situations in our dual denomination environment."

ATM: Fraud

"Total number of cases filed are higher than 1983, while total dollar loss is less."

"Losses have declined; however, cards lost with the PIN seem about the same."

"Frauds are equal to last year in number and amount, again losses primarily due to customer negligence in regard to PIN security."

"ATM fraud remains minimal. The losses that we experience continue to be related to unauthorized use of a customer's access card, as defined in Regulation E."

"Losses are down approximately 10 percent from a year ago even though transactions volume is up over 15 percent."

"Losses and fraud cases have dropped considerably since our conversion to an on-line network."

"The increasing cash availability with the proprietary card in regional and national ATM networks and point of sale has only served to increase bank exposure to fraud losses. Increased customer awareness of PIN and card security is needed to minimize the losses attributed to card fraud."

"Improved recognition of ATM fraud though a better developed program: 1) system programs, limits access when unusual transactions occur, 2) increased photography at individual locations, 3) employees hired full-time to investigate apparent fraudulent situations."

"Losses average $500 per ATM per year."

"Losses average $2,000 per ATM per year."

"Major problem has been with the "hat" bandit. He steals the card, wears a hat to protect him against our cameras, and fraudulently uses the ATM."

ATM: Security

"Considering the use of a third-party security system for the servicing of our ATMs."

"Remains high. We are implementing a pilot test, involving security cameras and CCTV on an in-house, test ATM. Plans are to install on selected ATMsthroughout our system."

"As brick and motar offices are replaced by ATMs, ATM security becomes increasingly important. Criminal abuse of these machines can only be kept in check through careful planning of selectioning a location, providing adequate lighting, and using quality electronic surveillance."

Regulation E

"Finite controls will have to be introduced to aid the consumer and the financial institution against significant and irrecoverable losses."

"Volume increases dramatically with multiple switch interface. Proprietary networks have less control over errors involving an interchange partners, and in most cases time delays are common."

"Reg E is written for consumer protection and completely disregards the rights of banks. At the time this regulation was written, ATM usage was a novelty and customers needed protection. Today, with widespread use, banks need to be protected from negligent customers and fraudulent claims perpetuated by the cardholder."

POS: Settlement

"Terminals are settled daily. Totals settled by interchange, proprietary and credit for the merchant."

"Return items have increased proportionally to the amount of purchases since the inception in June 1984."

POS: Return Items

"Merchant/consumer adjustments are supported. A reversal/void transaction is provided for merchandise returned."

"Returns increased 17 percent in 1984, while sales increased only 12 percent."

POS: Security

"The PIN is encrypted at the terminal level. A password is required for terminal sign on. Administrative transactions are restricted at terminal level via a password."

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